

# THE LEHIGH REVIEW



*A Student Journal of the Liberal Arts*

VOLUME FOUR

SPRING 1996

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Each year, Lehigh University publishes *The Lehigh Review*, a student journal of the liberal arts. Every issue contains some of the best writing by Lehigh students.

Any scholarly articles, creative essays, or book reviews may be submitted. The Review does not ordinarily accept fiction or poetry.

All submissions should reflect the breadth and depth of the liberal arts. We are especially interested in submissions that draw from the content or methodology of more than one discipline. The Review expects students to submit well-researched and well-written work that exceeds mere reflection or synthesis of existing sources. Submissions should demonstrate imagination, original insight, and mastery of the subject.

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The price is still high. The price of an education is what it has always been: the courage to work without a net. The papers published here record the challenges overcome and the thrills discovered as our contributors explored the realms of thought, without a net. We salute the vigor, the intensity, with which they have confronted their educational experience, and hope that neither they nor we will ever give up the dense joy of working without a net. Writing creatively, critically, and freely within the varied realms of the liberal arts is in its own right a form of "wired" engagement with the world.

The Editors.

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## A College Man's Religion

R. Max Gaepp, Jr. '28

Reprinted from *The Lehigh Review* 2.1 (Fall 1927)

In 1927, the editors of *The Lehigh Review* introduced this sometimes prickly essay with the following paragraph:

Fifty years ago religion was not a matter for public debate, but for preaching. Today it is preached less and discussed far more, in books, periodicals and, more significantly, colleges. In the argument as depicted here, Protestant, Catholic, Atheist and materialist have it out with each other—and though all are open to conviction, none are convinced.

The whiff of religious bias in this article makes this an occasionally uncomfortable essay to read today. We reprint it now both as a mirror of earlier tensions and prejudices and as a testament to the increased institutional breadth, intellectual growth, and respect for religious differences that mark the ongoing history of this university. It is also worth noting that in these postmodern years at the end of the century the relation between sciences and religion is—perhaps surprisingly—even more ambiguous than it was in the 1920s.



"Yes," said Earl Brandon lazily watching the smoke from his pipe curl up toward the ceiling "the frosh are getting out of hand. Those sophs are lying down on the job something fierce. They ought to put the fear of God into them."

"H'm, suppose some of 'em are atheists," said Ed Pollock, a desperately cynical sophomore.

"All the more reason why the fear of God should be put into them. A little religion around this man's college wouldn't do any harm at all."

"That, my dear young man, is a point to be debated. I personally believe that the less of that sort of thing there is around college, the better for all concerned. However, as always, I'm open to conviction."

The other occupants of the dormitory room settled down in their chairs, confident of a good pitched battle between the house atheist and its most active church member. Two of them were freshmen, as yet too lacking in self-confidence to volunteer an argument, the third, Jack Ring, a junior, was perfectly willing to listen to anything, so long as he was spared the effort of putting his more abstract

thoughts into coherent speech. They all eyed the first speaker. Brandon filled and relit his pipe, cleared his throat, and joined battle.

"Well, in the first place, do you admit that everyone should have some kind of religion, some belief in a God who rules the universe and watches the affairs of men?"

"Nope, all I'll allow is some code of ethics to live by, that's all that is necessary."

"But that isn't enough. Men have always felt the need of a Supreme Being, to whom to look for guidance."

"Yes, and why is that? I personally believe that the reason most men think they believe in God is because they're scared to be in a world without one, they figure that there must be a God, because it would be too awful to think there wasn't any kind of old bird up yonder who cared whether they did their jobs, saw that the wicked got punished and the good their reward. What other reason is there? Personally, I'm an atheist, thank God."

Everyone grinned but Brandon.

"There is every reason to believe in it. There is the Word of God, revealed in the Bible, through Christ. There is the whole of the universe, all the handiwork of the Lord. Why, you and I are living proofs that God exists, since we are His children. And besides, are you fool enough to say that the whole Christian religion, which has comforted millions of people for two thousand years, is founded on untruth. Why, there must be something in an idea that has lasted that long."

"You haven't proved anything. In the first place, just because millions of people believe a thing for several centuries doesn't say that it's true. That was the case with the rotation of the earth, and the rising and setting of the sun, until some astronomer proved that the earth revolved and the sun stood still. And besides, if your idea was true, then the Chinese religion would be the true one, since many more people have believed that for five thousand years."

Earl Brandon retreated skillfully. "That's no argument either. The heathen did not have the word of God revealed to them, it was revealed only to the Gentiles, and God certainly would have revealed himself to the heathen if he intended that they should be brought to Christianity. No, God is working His purpose out in ways which He knows are best. How can you, a twenty-year old, half-baked mortal, presume to judge of His actions? Why, your rashness would be terrible, if it weren't so funny. Thousands of men with more learning than you'll ever have thought deeply about Christianity, and have found it thus the only living faith. Remember, the fool hath said in his heart, 'There is no God'."

"The fool is also known by the number of his words," put in Jack Ring, suddenly, who was not above giving comfort to the enemy if he could exhibit his wit in the process. Brandon, however, ignored him.

"Can't make me mad," replied Pollock. "But personally I'd stack Robert Ingersoll or Tom Paine against any of your Church Fathers. However, we aren't getting anywhere with the original argument."

There was a temporary lull, while Ed Pollock secured a cigarette. Juan Muriel, a serious minded, brilliant South American, entered the room. "What the Hell, a bull-session? What were you talking about?"

Brandon hesitated. The frosh, realizing that the newcomer was a Catholic, became slightly embarrassed. Pollock, however, who cared nothing for the feelings of anyone, plowed straight ahead.

"We were arguing about religion," he said, "and whether or not there is a God. Brandon's been trying to tell me I'm a half-wit because I don't go to church, believe in the Bible, or say my prayers. What do you think about it?"

"That is your own private affair, my friend," said the South American gravely. You may be a half-wit, but the existence of God has nothing to do with it. What you do not believe does not trouble me."

"Why, what kind of a Catholic are you? I thought all Catholics considered all other sects of Christians as headed straight for Purgatory, and the heathens as headed straight for Hell. Am I right?"

"That is not correct, my friend. We believe that the church, and by that we mean the Catholic church, is the guardian of the soul of man, that the church is the earthly agent of God's power, that God has made known his wishes on human affairs through the Bible and his prophets, and that the Pope shall decide on all questions of interpretations. Therefore, all Protestants who believe that every man can judge for himself on questions of Biblical interpretation, cannot attain salvation until they have atoned for their sins in purgatory."

"Well, if that's the case," said Earl, glad to be free of Ed for a moment, "how do you explain the three Popes that they had for a while? Were all of them the direct descendants of St. Peter? If they disagreed, which one was right?"

"The Popes are chosen by men, and men may not always heed the promptings of God when selecting the Pope. But, in diversity of authority, you Protestants are far worse than the Catholics, for although at one time we had three Popes, you now have about three hundred different sects. At least we agree among ourselves, but you never agree. If, as you say here in the United States, the majority is right, then the Catholics are of course the only true Christians."

"It's my personal opinion..."

"Say, Ed don't you ever have any opinions but personal ones? You've used that word about fifteen times tonight." Ring had again come to life.

"You go to the devil. As I was saying before being so rudely interrupted by the gentlemen on my right, it is my personal opinion that all the different kinds of Christians are in the same boat. I always got a big kick out of the fact that they have to keep a company of soldiers in the church at Jerusalem erected on the supposed spot of crucifixion to keep the different sects of Christians from murdering each other over points of doctrine."

"Uh-huh, I guess you thanked God you weren't a Christian, didn't you."

"Shut up, Jack, you aren't in this. Why, as far as I can see, Christianity has

caused more trouble in this world than any other single human institution. Look at the thousands of people murdered in the name of Christ, because they chose to believe those the doctrines as he taught them, not as the Pope decided they should be interpreted. Every single idea that was proved to be good for mankind was opposed by the Church. They burned Joan of Arc, they made Galileo recant, after he had proved that he was right, they banned all books which encouraged men to think for themselves, and, what was the worst thing of all, claimed that life in the Middle Ages was ordained by God, that to attempt to alter it for the better was blasphemy, and that the troubles in the world would be made up for by the delights of Heaven. I think the world would have improved a whole lot faster if there had been no Catholic Christianity."

"There's something in that," said Brandon, "because it wasn't until the Protestant Reformation that modern civilization got started. That's when men first started to think for themselves, and not be told what to believe by a man in Italy. That religious freedom in Europe made it possible to get civil freedom later. Now, thanks to Protestantism and the will of God, the world has advanced to the stage it is now. If the early settlers had been Catholics, this country wouldn't have developed as it has."

"If I remember rightly," Pollock interposed irrelevantly, "there is a story about one of the Popes giving birth to a child in the midst of a papal procession, wherefore, as the tale goes, she was not numbered among the pontiffs. I think I read that in a book by Baring-Gould. Have you ever heard of it?"

Murios flushed. "Is this a discussion, or are you trying to be insulting. The legend that you spoke of was Pope Joan, and it was only a legend. If you fellows wish to throw mud, I can do it too. It was your progressive Protestants or Puritans who burned innocent old women as witches as late as the seventeenth century. The Protestants of the South in our own times, tar and feather helpless black men for mere sport, and in the name of God, while in Herrin, Illinois, some descendants of the original Protestant settlers committed the most cold-blooded massacre that this country has ever had. You, with your hundreds of little sects, have lost true religion. You take one single part of the ritual of the Catholic church, like the baptism, the advent, the salvation by faith and make it the central point of your belief. You are all offshoots of Mother Church, and you all disown your parent."

"That all may be," countered Brandon, "but the Protestants never tortured a man for the sake of his own immortal Soul and in the name of Christ."

"They would have if the law had allowed them to. They preached that unborn babes were slated to go to hell even before they came into the world. And that isn't the worst thing, either. Whatever the Catholic religion was, it was beautiful, and the pictures of saints and the churches and cathedrals were beautiful. When the Reformation started, it was the Protestants that broke into the churches, smashed beautiful images and tore up wonderful paintings. Then they built churches for

themselves that were plain and bare, with nothing to appeal to a man's soul in them."

"Why not. Pictures and images are heathenish idols, they do the soul of man no good, but only appeal to his senses, and turn his mind and heart from the worship of God."

"Who told you he was a God of ugliness. You seem, as somebody said, to be strong for the beauty of holiness, but not for the holiness of beauty. And another thing, all true and sincere Catholics are comfortable in their religion, it gives them peace, but your Puritan Protestants were so damned narrow-minded that they brought their children up to fear the Lord as a terrible ogre of vengeance, not think of Him as God of love. Do you know that a six year old boy in New England, before the Revolution, committed suicide because his sense of sin made him feel so badly. Your idea of getting a man into Heaven is to make him miserable on earth."

"Well, don't bawl me out about it, I'm not even a Protestant," protested Pollock. "It's my personal opinion that the whole idea of Christianity, Catholic or Protestant is rotten. Why anyone would want to get into Heaven because some poor chap had died in agony for them is more than I can see. This body and blood stuff at the communion sounds like sheer cannibalism to me."

The silence which followed this was ominous, became almost unbearable, until in desperation one of the freshmen, broke it.

"Say, fellows, why do you have to argue and scrap about what you believe? And if you can believe one thing and be happy, why not do it and not bother about the other fellow? I don't go to church an awful lot, I'll admit, but I'm not an atheist like Ed. It isn't the kind of thing I care about, anyway. If we are all Christians anyway, our chances for future life ought to be about the same..."

Voices were heard outside the door, then someone broke into a ditty that was quite popular in the house at that time.

"I don't care if it rains or freezes, I am Jesus' little lamb. I am safe in the arms of Jesus. Yes, by Jesus Christ I am." Everett, the frosh who had just spoken, evinced profound disgust, mumbled something about bed, and departed. Ring, with a sheepish grin, followed him. Again the talk died down until revived by the entrance of Judson Smith, a senior, whose views on various subjects could be counted on as being different from that of most of the house, in fact, he rather cultivated eccentricity of opinion.

"Women or sport?" he asked, dropping into the best chair in the room. "H'm, looks like religion and the immortal soul. Who's been taking a beating?"

"I've been showing the boys the error of their ways," said Pollock, the irrepressible.

"That's very kind of you, I must say. Have you been talking on your favorite subject of papal iniquity? I swear I don't figure you atheists. You're the stingiest chaps I ever met. You evidently aren't happy in your own lack of belief, and you

want to drag every one else into the same mess of doubts. That Society for the Advancement of Atheism is one of the damnedest organizations I ever heard of, not a single constructive idea anywhere, and nothing to substitute for a fairly satisfactory faith. And as for sneering at Catholicism, it was the Catholic church that kept alive enough learning through the Middle Ages to give you an education now, which you seem to be devoting to picking flaws in the institution that taught you."

"Who's showing the error of somebody's ways now, Jud?"

"Why I am, sure. Aren't you grateful for a little guidance? Here I take all the trouble to point out to you all the weak spots in your arguments, and this is all the thanks I get. It's enough to make one lose faith in humanity."

"Huh. Well, I'm going to bed. Hope you don't feel hurt? Good-night. You and Murios can settle this between you," and Pollock departed.

"I do not like that fellow very much," said Murios after a few seconds.

"No, I don't imagine you would. How about a cigarette?"

"Thanks. Also, my friend, have you ever been by chance, a Catholic? You seem to share my views on Pollock."

"No, old man, I'm not a Catholic, I'm just rather interested in religion as a whole and as a topic for discussion. But I respect the Catholic church in many ways, although I don't hold with any of its principles. I'm afraid I'm too much of an egotist to take the word of any other human authority on what I shall believe about things which no man can find out definitely for himself."

Murios yawned, and rose to go.

"Wait a minute, old man. Don't go for a while yet. Do you mind if I ask you a question that's been puzzling me for a while? Don't answer it unless you feel like it."

"I guess so. Go ahead, although I won't promise."

"Well, I know you were brought up in a Catholic country. I've heard the saying attributed to the Catholic church, 'Give us the education of a child until it is seven, and it will always be a Catholic no matter what its future education may be.'"

The South American nodded.

"Now, you have been here at an American, non-sectarian college for four years, and you've been taking a scientific course. What bothers me is, how can you think deeply about the laws of life and the properties of nature, and still believe in miracles, the virgin birth, papal infallibility, confessional, and the rest? Doesn't your mind quarrel with your religious feelings?"

"Jud, what you said about the Catholic church and young children is true. I believe in the Catholic church and will fight for it. I have been a Catholic all my life, and I will die one, but just now well, I'll tell you how it is.

"When I was a child, in my own country, I believed everything about Catholic Christianity, everything, the way a child does. Then one day some fellow told me about birth and conception, and he asked me, 'Do you think Christ was born of a virgin?' I did not know, because I had believed very strongly, but he put the idea

of doubt into my mind. Then as I grew up and found out about men and women and heard scandals about priests, I began to have more doubts, although I was still outwardly a good Catholic. Then I came to this country, and at college many of the professors said that I must judge everything for myself, to see whether it was true or not, and that I must not take any man's word for anything that could be proven otherwise. And I learned a lot about the world and the way it is put together, and about natural laws, so that it got harder and harder to believe in miracles. I was worried, because I wanted to be a good Catholic, but my mind made me doubt, and a good Catholic is not supposed to have any doubts."

"Do you think most Catholics have the same sort of experience?"

"No, they don't. They don't try to think about it, and their minds don't bother them. They don't expect everything to follow the laws of natural science, because they don't know what the laws of natural science are. And they are lucky."

"Well, but do you think, Juan, that your mind will ever conquer you Catholic upbringing?"

"Judd, I am going back to my country, after I graduate. I will live there all my life, and I will be pretty sure to marry a girl who will be a devout Catholic. Just now, while I am in college, my mind gets plenty of practice and there are very few priests to tell me to come to confession. When I'm home, I will go to the church every week with the family, and my child will go a Catholic school. When I am fifty I will have forgotten most of my doubts, and when I die, I will want a priest, but now I am having one Hell of a time." He puffed for a while in silence. "I still go to confession because it is a habit that is pleasant and I don't see why I should give it up. There is your answer, Jud."

"I see your side now, old man, I'm genuinely sorry for you. For my own part, I've got my own system of beliefs pretty well worked out. The only thing I choose to believe is that some external, impersonal force created this universe quite a while ago, and set in motion certain forces and tendencies which have finally produced the human race and myself. I don't regard myself as being any more a special act of creation than any blade of grass or any pebble. I'm just a product of a long chain of causes and effects. If you don't believe any more than that, then you are never troubled by any conflicts between science and religion, and you don't have to try to twist the meaning of the Bible to fit present day facts."

"But if you don't believe in any personal God, or any life after death, why don't you tear out? What keeps you from going to the dogs, as you say?"

"Why, that's just the result of my training, and a certain amount of self-respect. I wouldn't think an awful lot of any man who had to be scared into keeping himself decent. Anyway, that doesn't have anything to do with creeds and religions, that's just the problem of human conduct. However," he yawned, "let's call it a night."

The two rose, stretched themselves, and went down the hall. Voices were issuing from a room at the rear end of it. The sophomores were holding a council of

war, and, as the two went past the door, they heard, within:

"The Frosh are getting out of hand something fierce. Something's got to be done. We ought to put the fear of God into them."

## The Painterliness of Paterson V: Reinventing the Icon

Elizabeth M. Olsen

### I. William Carlos Williams, painterly poet

Book V of *Paterson* reigns as the great afterthought. In the epic revisited, William Carlos Williams strives to say just what he means once more or, more specifically *make* just what he means. Yet, for the past few generations of students the later addition of Book V exists merely as an anecdote in literary history. An author's note informs new-comers of the invisible breech that spans books five and four, but their bound copies contain no such breech. The poem glides from preface to Book V without any hint of later-addition. Still, even for these newborn scholars who clutch complete copies of *Paterson*, the issue of the late-coming fifth book is indeed significant. Although unable to truly apprehend the turmoil this addition caused back in 1958, the singularity of Book V certainly distinguishes this book from its companions. Book V is the only book that dons a dedication while neglecting a title. Although the whole of *Paterson* demonstrates an interest in the visual arts, Book V beginning with the dedication to Henri Toulouse-Lautrec promotes this earlier interest to a veritable fascination with the art world. Moreover, the city of Paterson is barely discernible here, and Mr. Paterson receives little mention as well:

Paterson has grown older

the dog of his thoughts  
has shrunk  
to no more than a "passionate letter"  
to a woman, a woman he had neglected  
to put to bed in the past.

And went on  
living and writing  
letters  
and tending his flower  
garden, cutting his grass and trying  
to get the young  
to foreshorten

their error in the use of words which  
he had found so difficult, the errors  
he had made in the use of the  
poetic line:

" . . . the unicorn against a millefleurs background, . . . "

(230-1)

Paterson and poet have grown older. This passage best echoes what must have been Williams' state of mind as he returned to his epic to create Book V. And in the aforementioned author's note, Williams further clarifies his purpose for return: "I had to take the world of *Paterson* into a new dimension if I wanted to give it imaginative validity." Williams does not want to tend to his garden any longer. Rather, he wants to tend to his poem and to the future art world. According to his poetry, Paterson has left his garden for three purposes: to end the neglect of a neglected woman, to rectify the verbosity of the young and to reapply a misapplied line. If Book V succeeds at this charge then Williams has created the new dimension he believed his epic lacked. So then, the reader must view Book V as the retired artist stepping out of his garden so that he may deliver his new and improved aesthetic credo.

In order to understand Williams' message, then, a background in Williams' aesthetics is essential. And as Book V's preoccupation with visual art affirms, Williams' poetic philosophy is inspired by the other artistic disciplines, particularly painting. In fact, Williams cannot even explain his philosophy without using painting as a metaphor. This is quite evident in Williams' "Prose from *Spring and All*:"

But such a picture as that of Juan Gris, though I have not seen it in color, is important as marking more clearly than any I have seen what the modern trend is: the attempt is being made to separate things of the imagination from life, and obviously, by using the form common to experience so as not to frighten the onlooker away but to invite him . . .<sup>1</sup>

More than an example of Williams' reliance on painting as a vehicle for his philosophy, this statement also allows us a glimpse into his aesthetic viewpoint. Artists must take common forms and elevate them to art. The audience will be able to discern these common forms within the artwork, and they will find comfort in these recognizable images. These common images, then, become the imagination separated from life by way of art. The artwork will be inviting because the audience will find something of their world present in this otherwise cryptic art world.

Still, art is not abstraction of the recognizable for abstraction's sake only. In his introduction to *The Wedge*, Williams resorts to the fundamentals of art, stressing

that art is a process of making, whether the medium is paint or words. In *making* a poem, the poet composes the recognizable (words, phrases, images) *without distortion* so that they still may be recognized:

When a man makes a poem, makes it, mind you, he takes words as he finds them interrelated about him and composes them—without distortion which would mar their exact significance—into an intense expression of his perceptions and ardors that they may constitute a revelation in the speech that he uses. It isn't what he says that counts as a work of art, it's what he makes, with such intensity of perception that it lives with an intrinsic movement of its own to verify its authenticity.<sup>2</sup>

The making of a poem, then, is not an arbitrary abstraction (this certainly would *mar the exact significance* of the word or image), but a deliberate arresting of the movement intrinsic to the word or image. Such stilling certainly can abstract the image, and yet, it can also maintain its recognizable significance. Still the intrinsic significance (that what makes the image recognizable) and the intrinsic movement stilled (that what makes it part of the artwork, a made-thing) can only be dually apprehended when the audience maintains that fundamental truth that poetry—like all arts—is *made*, not written. In other words, one cannot approach poetry as a written record of images and sensations, rather we must view it as something acted upon, something made. Naturally Williams' poetry serves to best exemplify his aesthetic philosophy. His preoccupation with the making of poetry, as well as his tendency to look to painting to further elucidate his theory, renders the poet himself a painter of words. Karl Shapiro aligns Williams' poetry with painting citing this ability to *still the image* as a commonality:

In Williams, as in Wallace Stevens to a lesser extent, we have the ultimate development of form that seems to arrest or still the image...Even when the subject matter is of a very violent nature, as is often the case with Williams, the extreme surface of the poem remains or attempts to remain at a dead calm. It is poetry as closely allied to painting as any I know.<sup>3</sup>

By painting the poem, by stilling the image with words while maintaining its kinetic energy, the artist succeeds in rendering the subject abstracted, yet still recognizable. Williams' poetic line is his own effort at this feat. The line is the great unifying factor of the poem; it is what anchors the reader to the poem. Roy Harvey Pearce defines Williams' purpose for creating poetic lines: "The role of the 'line' here is to control and modulate revelation according to the nature and needs of the poet and reader, and of the language they share."<sup>4</sup> One such poetic line is the aforementioned: "*the unicorn against a millefleurs background*" (231). The unicorn runs throughout Book V, and therefore serves as a line for this particular section.

Williams has alluded to this great beast in the previous four books and makes his first direct reference in section II of Book III. So the unicorn acts as a line for the whole of *Paterson* and also binds the late-coming Book V to the other books. Still, Williams hopes that his unicorn was first recognized from its original source, the medieval French tapestries. Following the example of Juan Gris, Williams invites his reader to explore *Paterson* with this common and repeated, yet imaginative image.

Recall that Williams thought that his unicorn against a *millefleurs* background was a misapplied line. The reintroduction of the tapestry images (specifically, the unicorn) into Book V must then be viewed as an effort to reapply the line correctly, and this time in an effort to add another dimension to *Paterson* and to edify budding artists. Still, the question remains, what is the unicorn's lesson? Louis L. Martz cites Williams' juxtaposition of the unicorn and the statement, "*I Paterson, the King-self*" (234) as a key to the unicorn's purpose: "[This juxtaposition] implies a parallel between 'Paterson,' the poet, man, self, and city of the poem, and the unicorn. The mythical beast is the spirit of the imagination, the immortal presence of art."<sup>5</sup> The unicorn, then, symbolically represents this immortality. This mythic beast pays homage to the imaginative force that pilots art; and art reciprocates this gesture by affirming the mythic beast's claim to eternal life. By juxtaposing man, self and city with the unicorn, the mythic and symbolic baggage the great beast brought to the poem (imagination, immortality via art) is carried over into these newer images. Williams wants to perpetuate these ideas throughout all of *Paterson*, and the unicorn's reappearance in Book V as a teaching tool for new artists only serves to emphasize how the unicorn has endured in both art and the imagination.

And if the poetry did not make this lucid, then Williams follows the misused line passage with this prose passage in hopes of making his purpose clearer: "There is nothing sentimental about the technique of writing. It can't be learned, you'll say, by a fool. But any young man with a mind bursting to get out, to get down on a page even a clean sentence—gets courage from an older who stands ready to help him—to talk to" (231). The concept of a great tradition of art where one generation of artists leaves a creative legacy for the a younger generation to use as they will is neither original nor new to Williams. His use of the unicorn illustrates his understanding of this tradition, as well as his own particular viewpoint regarding inheritance rights. Williams inherited the unicorn and all its symbology and mythology so that he may use the image to his modern advantage. In this particular case, it's to juxtapose that unicorn with a cityscape, a man derived from that cityscape and the king-self derived from that man. Book V figures nicely into Williams' agenda because in this later-addition he assumes the role of bequeather preparing his poetic will for the next generation of artists. The prose, then, is there, as it was through all of *Paterson*, to help the reader (specifically the newer generation of artists) along.

One of *Paterson*'s trademarks is this undulation between prose and poetry. Like a canvas heaped with paint in one corner, and then left naked in another, Williams pendulates between wordy letters and sparse trails of poetry. This, in addition to his obvious concern for painting, render Williams a painterly poet. Moreover, like the unicorn, taken first from the tapestry and then set free to run throughout all of *Paterson*, the prose also serves as a source of recognition for the reader. The reader can recognize the prose in the poetry and the poetry in the prose. This is not poetry made easy; rather, this is art made essential. Brian A. Breman urges the reader to leap between the poetry and prose of *Paterson* so that language in general may be liberated: "It seems necessary for both poet and reader to leap successfully, unlike Sam Patch or Sarah Cummings, from 'prose to the process of the imagination' in order to break up the staleness that is 'the greatest characteristic of the present age' and to free the language of *Paterson*."<sup>6</sup> Breman cites Williams' own definitions of poetry and prose to validate his argument. Most essential here is Breman's acknowledgment of the necessity to pass through the prose in order to reach the imagination. One must be capable of seeing the reality itself before one can apprehend the reality as portrayed through the imagination, within the poetry as stilled and somewhat abstracted. Recall Williams' statement that Juan Gris was to be commended for a similar effort, for taking the usual (recognizable) and making it art. According to Williams, "it is that life becomes actual only when it is identified with ourselves. When we name it, life exists."<sup>7</sup> Juan Gris speaks our language, through the great translator called art, by using those things with which we can identify: collage with newspaper clippings, guitars, etc.

Williams fears that the art of his garden days, in other words, the generation of art that follows his own, does not acknowledge this need for recognizability. In *Paterson* he refers to current artists as making errors: "in the use of words which/ he had found so difficult." If the words are too difficult, then they cannot be recognized, and consequently the connection between life and art is severed. Of this connection, crucial to Williams, James Guimond writes: "First he was determined that his poetry should reveal a 'contact with experience' which was essential to good writing. The artist must be continually in touch—no matter how imaginatively or circuitously—with his 'locality,' 'an immediate objective world of actual experience.'<sup>8</sup> So Williams returns to *Paterson*, returns to his great canvas of a city in an effort to rectify both his own mistakes and to guide other artists away from making their own errors of ambiguity. To do so, an artist must make his art recognizable. The artist must make an icon.

## II. The Making of an Icon

With the misused line set somewhat right by its reappearance in Book V, this brings us back to our neglected woman. In "The Delineaments of the Giants," the first book of *Paterson*, Mr. Paterson was first introduced as: "only one man—like a

city" (7). On the other hand, women are flowers: "A man like a city and a woman like a flower/—who are in love. Two women. Three women./ innumerable women, each like a flower" (7). Could this be the neglected woman, recalled, ironically while tending the garden? Perhaps. More importantly, the neglected woman and her appearance in Book V establishes the poet's need to elaborate on an idea he feels he only touched upon in the previous four books. Like the unicorn, the misused line, this woman has appeared in *Paterson* previously, but her appearance was not frequent or full enough to render her recognizable, and therefore, she has been neglected; she has been given a position subordinate to the title character. *Paterson* has most certainly been about the making of an icon. The first four books in particular sought to acquaint us with Paterson (both cityscape and man) so that we might feel familiar with him. The fifth book, then, seeks to acquaint us with another icon, one that we only vaguely came to know in those other four books and one whose neglect should soon end.

The common female icon has generally been one of two contrasting states. She is the virgin, or she is the whore. She is divinely pure, or she is an earthly wanton. Williams begins his exploration of female icons with Lorca's *The Love of Don Perlimplin*, and to assist his purpose he provides the following prose: "at the end of the play, (she was a hot little bitch but nothing unusual—today we marry women who are past their prime, Juliet was 13 and Beatrice 9 when Dante first saw her)" (208). There is blatant misogyny in Williams' treatment of these female characters and in his comparison to women today. Still, the change in tone is too abrupt and the sentiment too exaggerated to read these lines literally. On the contrary, Williams is revealing a lesser-acknowledged female icon (i.e., "the young girl/ no more than a child/ [who] leads her aged bridegroom/ innocently enough/ to his downfall—" 208). Such an icon, as applied by Lorca, Shakespeare and Dante, presents the audience with the younger female, presumably innocent and unassumingly dangerous. When considered in a more general, less impartial sense, such a woman represents female desire, and if not properly applied by the artist, she can slip into becoming the whore icon—the dangerously sensual woman designed only for carnal pleasures. To Lorca, Shakespeare and Dante's credit, their use of the young, love-struck woman icon yields more substance than the bare whore icon could. Most do not refer to Juliet as a *hot little bitch*. Williams' ironic persona when discussing this particular icon illustrates the success of this character type as well as the overall timelessness of the icon. A timelessness that Williams celebrates in the line:

A WORLD OF ART  
THAT THROUGH THE YEARS HAS  
SURVIVED!

(209)

Icons, appropriate or inappropriate, pervade our art. They are what enable art to survive. They are what we recognize, the familiarity we seek when we examine a work of art. If they can be apprehended, then the art work is, to a certain extent, destined for survival.

Section III of Book V introduces what is perhaps the greatest female icon in all of art: the Virgin Mary. Williams explores this icon through Peter Brueghel's rendering in *The Adoration of Kings* (1564). Williams' poetry captures exactly what Brueghel had captured, not the common nativity scene, but one replete with imaginative sentiment and, of course, an icon. This imaginative sentiment is best illustrated by Williams' description of the onlookers: "whispering men with averted faces/ got to the heart of the matter/ as they talked to the potbellied/ greybeard (center)/ the butt of their comments,/ looking askance, showing their aversion at the scene ..." (226). They "got to the heart of the matter" because they are the objective critics of the situation. The "potbellied greybeard" is Joseph who is the "butt of their comments" because he has had nothing to do with this alleged virgin birth. This is more than a painting, this is a commentary. It is a commentary on the plausibility of this Christian myth. Mary is present in the scene as her typical iconic self. Brueghel can do very little with this icon directly, and this is why he shifts the attention to Joseph. The power of her virginity (true or mythic) is unshakable, but Joseph is malleable. An icon can still be made of him. Brueghel renders him the icon of, to use Williams' term, "dispassion" (228).

Terence Diggory alleges a trinity of passion between mother, father and child:

The child Passion, of course, lies ahead of him. To give entrance to that Passion, Mary's duty, Williams makes clear, was "to give herself to her lover" (229). But Joseph's gift is a non-giving. To serve dispassionately, as he does, is to establish a differential relation to passion and its object, to discover love in a sexual loss, to disclaim possession of the object but to keep it in sight. This is Joseph's relation both to Mary, the body of passion, and to the child, its product.<sup>10</sup>

Joseph can claim no involvement in this great event that has spurred the adoration of kings. His "differential relation to passion and its object" is his willingness to participate in the scene even in light of his non-involvement. Diggory inflicts his own romanticizing upon the scene when he claims that Joseph can find love in this "sexual loss." What Joseph has found, as far as the picture and poem tell us, is public ridicule. To claim that this is, as Diggory asserts, "a sexual dimension in the relation between husband and wife"<sup>10</sup> is to over-analyze the icon. An icon must possess a directly unsulliable surface. Recall Williams' declaration that the world of art has survived throughout time. Art has survived due to the unbending force of these icons. They themselves are unchanging, it is the scenes in which they are placed that can change, and this becomes the charge of the inheriting

artist. So, one cannot tarnish Mary's virginity directly, but one can do so by subtle and indirect means. Just as the established unicorn icon strengthens—by way of association—Williams' fledgling efforts to make an icon of Paterson, man and self, Brueghel uses the association between Mary and Joseph to assist his efforts to weaken another established icon. If Mary is an icon to virginity, then Joseph is an icon to the absurdity of that claim in light of the newborn child. As Joseph emerges as that icon to absurdity, suddenly Mary's own icon-status is called into question.

An icon is made when a value is attached to a figure. We have Mary, and then we have the Virgin Mary. It is the Virgin Mary that has pervaded human history and art. Throughout the first section of Book V, Williams shifts between the two very common iconic images of woman, virgin and whore, often blending the two to better illustrate the arbitrary nature of such gross generalizations:

**The moral**

proclaimed by the whorehouse  
could not be better proclaimed  
by the virgin, a price on her head,  
her maidenhead! (208)

**The whore and the virgin, an identity:  
—through its disguises**

thrash about—but will not succeed in breaking free :  
an identity (210)

**—the virgin and the whore, which  
most endures? the world of the imagination most endures:**

(213)

Icons are identities perpetuated by disguises. The disguises are perpetuated by the imagination that in turn renders them into art. When placed within the world of imagination, these unbending, often unjust icons are revealed as both a generalization of and limitation for the women they supposedly represent. In other words, women have suffered the consequences of these polarized categorizations. She has been expected to fulfill the paradoxical roles of either chaste mother or nameless, sexual outlet. As an inheritor of these icons, the artist must use his imagination to challenge these icons (in turn, the same imagination which has and will allow the icon to *endure*—but hopefully, endure in an altered, improved state). Of course, they can *thrash about* with the icons themselves, to no avail, or challenge them obliquely as Brueghel did. The audience will always find comfort in their ability to recognize the whore (or virgin) icon within the artist's work, and hope-

fully they will also discover another facet to this icon, that this particular whore icon is more than the previous artist allowed it to be. Suddenly the purpose of Williams' dedication to Henri Toulouse-Lautrec is elucidated.

In the latter part of the 19th century, Henri Toulouse-Lautrec sought the squalid side of Paris for artistic inspiration. The dance halls and brothels, spurned by his contemporaries as unbeautiful, were canvases full of possibility for this artist. In his biographical analysis of the artist, Bernard Denvir described Paris of Toulouse-Lautrec's day as "a virtual synonym for sexual escapades." More interesting, though, is his depiction of the common Parisian attitude regarding prostitution:

There was also, however, something peculiar to the ethos of the age which motivated the concern with prostitution so typical of that time. The idealization of woman as a thing of purity, even of inaccessibility, and the notion of romantic love which had been engendered by the poets, writers and moralists of the first half of the century, impelled men to use their wives for child-bearing and domestic duties, other women for pleasure.<sup>11</sup>

Likewise in Book V, Williams portrays a similar phenomena where man strives to hold two separate camps, one for his chaste mother figure and one for his sexual outlet:

—every married man carries in his head  
                  the beloved and sacred image  
                  of a virgin  
                  whom he has whored  
                  but the living fiction  
                  a tapestry

(234)

Deliberately, Williams juxtaposes this romantic image of whore and virgin with the actual hunting of the unicorn. If the unicorn is indeed the imagination that binds the entirety of *Paterson*, then we must view these conventional icons as detrimental to creativity. In a moment, Lautrec's own effort to demystify the whore-myth will be illustrated. For now, let us take Williams' words as a warning. The poet admonishes his readers (and particularly young artists) to not subscribe to these conventions as they are. Rather, they must use them and, above all, alter them somehow.

So in the midst of this romanticized debauchery, Toulouse-Lautrec ran headfirst into Paris' underworld in search of artistic inspiration, choosing a particular brothel on the Rue des Moulins for a particular series of works. According to Denvir, his artistic needs were more than satisfied: "It was this brothel and its inhabitants which inspired a sequence of works that constitutes the height of Lautrec's creative achievement and presents an aspect of life in a way in which no other artist

has ever surpassed." Denvir continues to praise Lautrec's ability to shatter those conventions prostitutes of that day suffered under:

[These works] reveal, amongst other things, that basic anarchism which refused to subscribe to the accepted conventional view of prostitutes as an alienated segment of society. He painted and drew them as human beings, with no irony, no contempt, and at the same time with none of the sentimentality that other artists had used to ingratiate them in the eyes of the Salon-going public.<sup>12</sup>

So in a society that viewed prostitution as the source for sexual pleasure, both scorning and seeking-out these women while in the pursuit of a romantic myth, Lautrec sought to remove all these aged, iconic veils, and he portrayed these women as what they were, simply, women in a particular, rather unromantic situation. And in the end, he created a new icon: the whore as who she was, not as who she was contrived to be.

The whore icon, like the virgin icon, cannot be changed on that fundamental level on which they subsist. Still, by calling attention to Joseph or by stripping the whore of her overly-romanticized accoutrements, the truer image exists. The audience still finds the familiarity they seek when viewing art. They still find the virgin and the whore, but under the brushes of Brueghel and Lautrec, they also find the truth that can coexist with these icons.

For Williams, icons are necessary when an artist wants to establish a rapport with his audience. Still, icons should not be idealizations, nor should they be left to stand on their own as absolute truth. The middle section of Book V, is tribute to artists who have succeeded, like Brueghel and Lautrec (and the earlier-mentioned Lorca, Shakespeare and Dante), in properly applying or establishing icons.

Section II declares:

the cure began, perhaps  
with an abstraction  
of Arabic art

Durer

with his *Melancholy*

was aware of it—

the shattered masonry. Leonardo  
saw it,

the obsession,

and ridiculed it

in *La Gioconda*.  
Bosch's

congeries of tortured souls and devils  
who prey on them  
fish  
swallowing  
their own entrails  
Freud  
Picasso  
Juan Gris.

(222)

These are the artists who have successfully created icons that transcend the traditional virgin/whore icon. These icons have also endured as recognizable, and consequently they are also the "*art that through the years has survived.*" Albrecht Durer's *Melancholy* (1514), has been dubbed by Francis Russell as an engraving that "has had more interpreters and interpretations than almost any other work in the history of German art." That statement is testimony to the iconic quality of this work, as well as an explanation for its presence in Book V. Williams calls our attention to the *shattered masonry*, this is a direct reference to the painting as well as a possible allusion to the artist's own toilsome task of breaking the previous icon's mold. While Russell calls our attention to the "brooding female figure," and his interpretation, although simple, serves as evidence to the icon's power: "Yet in a sense it is self-explanatory. The profound moods of depression that at times possesses us all beyond reason are summarized in the full-bodied, heavy-winged woman with her great eyes staring into space."<sup>13</sup> Williams' claim that people enjoy art when they can relate with it is validated here. Russell looks at this brooding female figure and senses something of the suffering of all mankind. The icon has been successful, it has communicated some truth to the audience.

While section I concerns itself with the overlapping extremes of virgin and whore, this middle section subtly examines the iconic contrast between melancholy and joy. To contrast Durer, Williams presents Leonardo da Vinci's *La Gioconda*. *La Gioconda* is actually the married name of Lisa, better known as the famed Mona Lisa. So, *La Gioconda* has served as an alternate name for the portrait *Mona Lisa* (1503).<sup>14</sup> Also, *La Gioconda* translates from Italian as "the merry one."<sup>15</sup> Perhaps when Williams' claimed that "*Leonardo saw the obsession and ridiculed it*" he was referring to the sort of merriment and good sportsmanship involved in challenging one's predecessor, i.e., it's all for a good cause, for the love of art, etc. This view takes a more whimsical approach to these generational coup d'états and stands in direct contrast to Durer's shattered masonry thus strengthening the polarization while likewise revealing their common source (i.e., the love and propagation of art). Williams' use of the more obscure title, *La Gioconda* serves a dual purpose then: to render this very well-known icon somewhat cloaked and to contrast, while likewise to compare, melancholy with merriment.

Still, merry has not been a term frequently associated with this mysterious icon. One could argue that the debate surrounding her secret smile, her knowing eyes has been a merry one, indeed; *Mona Lisa* certainly has persevered beneath that veil of ambiguity. She is proof that an icon need not be a direct conveyor of identity. Like *Paterson*, who is both man and city, *Mona Lisa* is also a compilation. Walter Pater captures best the many dimensions her image has cast:

All the thoughts and experience of the world have etched and moulded there...the animalism of Greece, the lust of Rome, the mysticism of the Middle Age....The return of the Pagan world, the sins of the Borgias. She is older than the rocks among which she sits; like the vampire, she has been dead many times and learned the secrets of the grave; and has been a diver in deep seas...and, as Leda, as the mother of Helen of Troy, and as Saint Anne, the mother of Mary; and all this has been to her but the sound of lyres and flutes<sup>16</sup>.

*Mona Lisa* is everywoman. She is the virgin, and she is the whore. In a single portrait of a lady, da Vinci has successfully captured everything. Everyone who approaches this masterpiece finds the familiarity, and for each, this familiarity is individual, personal. *Mona Lisa* stands alone as an icon to everything that is recognizable in human culture, our mythologies, our icons, our beliefs, our landscape. Consequently, she is a merry image, while she is also melancholy.

From *La Gioconda* we travel rather quickly through the pages of art history. Hieronymous Bosch is mentioned, no doubt for his prolific use of symbolism (an alternate form of iconography) in his "*congeries of tortured souls*." Then Sigmund Freud interrupts this free-versified art lecture, presumably to introduce the unconscious into the discussion. The revelation of the unconscious would have all sorts of ramifications for the art world, opening up a new world of iconography for artists to explore. Williams specifically mentions Pablo Picasso and Gris next, and Williams' earlier-cited opinion of Gris can apply here as well. The two cubists, both interested in collage, can be commended for their use of the familiar and everyday in their art, as well as for their quasi-scientific mastery of abstraction.

Of utmost interest here, though, is Williams' examination of those artists who have made successful attempts to *cure* the sickly female iconography. Lorca, Shakespeare and Dante introduced a young woman of substance capable of both love and passion, neither excessively celibate nor excessively promiscuous. Brueghel adroitly questioned the Virgin Mary myth (the myth most likely responsible for the chaste mother icon) by rendering Joseph an icon of another sort. Lautrec stripped the whore icon bare of all romantic imagery and created a truthful portrait of a squalid occupation. Durer's *Melancholy* and da Vinci's *La Gioconda* have pervaded our culture, one as a great symbol of human, specifically female, suffering, the other, of mystery. None subscribed to convention, all expanded these

female icons beyond their previous scope.

Still, this trend has not necessarily continued. If an icon is not altered (or abstracted), if it is permitted to persist in its previous form then the image is stale, exhausted and devoid of meaning. The neglected woman whom Williams did not "put to bed in the past" (230) is that exhausted female icon. It seems that Williams would rather see these female icons put to bed and fully neglected rather than perpetuated as a stale and unchanging convention. Until an artist is willing to expand and alter these icons, it will remain an icon of exhaustion—the closing of Book V best encapsulates this:

In February! in February they begin it.

She did not want to live to be

an old woman to wear a china doorknob  
in her vagina to hold her womb up—but

she came to that, resourceful, what?

He was the first to turn her up

and never left her till he left her  
with child, as any soldier would

until the camp broke up.

She maybe was tagged as Osamu  
Dazai and his saintly sister

would have it

She was old when she saw her grandson:

You young people  
think you know everything.

She spoke in her Cockney accent  
and paused  
looking at me hard:

The past is for those that lived in the past. Cessa!

(238-9)

This image of a woman, abandoned in pregnancy or shortly thereafter, also occurs prior to Book V. In Book IV, section 1 it she appears as a "weaker vessel" (179)

and a patroness who is deserted by the young conductor once he impregnates her (180). Like the soldier in Book V, the young conductor represents all artists who have taken up these icons, only to quickly desert them. The act of conception here is a metaphor for the creative energy with which Williams encourages all artists to charge their images. Female icons are weak vessels because they are susceptible to this creative charging, and because they have been frequently abandoned shortly after this charging. Any icon is an empty vessel waiting to be illuminated by the artist. The female artist is particularly vulnerable due to her history of mistreatment. Too many artists have abandoned her. She has been used, but not to fruition. Lorca, Lautrec and Durer did not abandon her, nor did Dante, Brueghel or da Vinci. Williams advises the next generation of artists to follow their example, to end this creation of bastardized art.

Still, she is a wise woman, this abandoned icon. Her exhausted womb shows the toil of many artists. She has learned, even when they have not. She echoes Mr. Paterson as she gripes, "You young people/think you know everything" (238). She too is stepping out of the garden to have her say. She knows that the "*past* is in the *past*," and that the art of the future should not grossly imitate this past. Icons should only provide familiarity, after that, they must be altered, abstracted, moved forward and pursued, not neglected.

Movement, of course, arrested movement, dominates Williams' conclusion to Book V and all of *Paterson*. "*The measured dance*" (239), a kinetic image stilled within a sentence, prompts the poet to write:

We know nothing and can know nothing  
but  
the dance, to dance to a measure  
contrapuntally  
Satyrically, the tragic foot.

(239)

To dance is to perpetuate art. The making of all art is a choreographed repetition of conventions that, by way of movement (stilled, suspended within punctuation, no matter how distanced) are transformed into something new. To return to *Paterson* seven years after its publication is in itself a continuation of this dance. And since human mortality ended the dance for Williams (the complete edition of *Paterson* also contains notes for Book VI), the poet ensured that the movement would not cease, even if he did. In many ways Book V is the poet's will bequeathing poetic advice for future participants in this dance. Book V triumphs in that certainty. As long as there are icons to be conquered, the dance, no matter how tragic, must go on.

## Endnotes

1. William Carlos Williams, "Prose from *Spring and All*," *William Carlos Williams: A Collection of Critical Essays*, ed. J. Hillis Miller (Englewood Cliffs: Prentice-Hall, 1966) 18-19.
2. Brian A. Breman, "The Radiant Gist: The Poetry Hidden in the Prose," *Twentieth Century Literature: A Scholarly and Critical Journal* 32(2) (1986) 224.
3. Karl Shapiro, "Study of Philomena Adronico," *William Carlos Williams: A Collection of Critical Essays*, 148.
4. Roy Harvey Pearce, *The Continuity of American Poetry* (Princeton: Princeton University Press, 1961) 336-42.
5. Louis L. Martz, "The Unicorn in Paterson: William Carlos Williams," *William Carlos Williams: A Collection of Critical Essays*, 73.
6. Breman, 225.
7. "Prose from *Spring and All*," 20.
8. James Guimond, *The Art of William Carlos Williams* (Chicago: University of Illinois, 1968)
9. Terence Diggory, "The Reader in Williams and Brueghel: Paterson 5 and *The Adoration of Kings*." *Criticism: A Quarterly for Literature and the Arts* 30(3) (1988): 349-73.
10. Diggory
11. Bernard Denvir, *Toulouse-Lautrec* (London: Thames and Hudson, Ltd., 1991) 142. This reference includes the previous quotation as well.
12. Denvir, 147-8. This reference includes the previous quotation as well.
13. Francis Russell, *The World of Dürer* (New York: Time Inc., 1967) 11. This includes all subsequent references.
14. Robert Wallace, *The World of Leonardo* (New York: Time Inc., 1966) 127. Mona Lisa was the third wife of a Florentine merchant, Francesco di Bartolommeo del Giocondo.
15. Alfred Hoare, *A Short Italian Dictionary* (Cambridge: Cambridge University Press, 1954) 168. The entry reads: *Giocondare*; to cheer up. -*ita f.*; cheerfulness. -*o*; merry.
16. Wallace, 140.

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## The Tragedy of the Common Folk

Kevin Kniffin

Thomas Jefferson's pastoral dream of a democratic America hinged on the ability of small-scale farmers to become more efficient with the advent of new technology (Matthews 1984:47). Because the world's population is doubling every thirty years (Allen *et al.* 1984:5), however, humans will be forced to rely more heavily on science for more stable and efficient subsistence. While most of the world's fisheries have reached their maximum sustainable yields, technological advances have given new hope to some fishers. Enhancement of fisheries, through aquaculture, offers the opportunity to farm enough fish to meet the growing demand of the world's population. Implementation of these development programs, however, must be sensitive to sociocultural effects, as well as economic and biological factors. While most development plans are purported to increase the "overall standard of living" in the target communities, I argue that development of any new business tends to favor the rich. To make this argument, I examine world fisheries.

There are three forms of aquaculture — extensive, semi-intensive, and intensive. Extensive aquaculture systems involve the least amount of capital input. These systems rely on nutrition provided by the sea to feed their stocks, while tidal pressures marshal their catches. Semi-intensive systems enhance the carrying capacity of a fishery by intentionally raising fish in ponds, planning for their eventual release into the sea. Intensive systems are fully dependent on external resources for their nutritional requirements; hence, of the three systems, they are the most capital intensive and most independent of the constraints of natural environments (Bailey 1988:33).

Domestication of fish is not a new idea. "The rearing of aquatic organisms under controlled conditions" (Libey and Bosworth 1990:291) has been practiced sporadically for several thousand years (Smith 1977:219; Bell 1978:275). Just as plants and land animals were domesticated in earlier stages of cultural evolution, it would seem that any evolution spurred by large population increases would select for further domestication of subsistence resources. "The last 10,000 years of the domestication of land plants and animals verifies the importance of domestication as a necessary process for establishing subsistence resources for complex societies" (Smith 1977:220). The establishment of aquaculture systems is not simple, primarily because it involves financial and territorial competition with oceanfront landowners, environmentalists, and commercial and recreational fishers.

The ecology of the communities targeted for aquaculture development is important. Unlike wild harvests that occur on large tracts of common property, aquaculture systems are territorially exclusive and seldom allow for the multiple use of land or sea (Fiske and Ple 1992:266). One of the keys to success in Norway's aquaculture industry is the availability of virgin coastlines (Dale, Owens, and Stenseth 1987:229). In America, however, development of aquaculture has been slow because of conflicts with commercial and recreational fishers, and environmentalists (Libey and Bosworth 1990:297). Smith (1977) notes that salmon domestication was introduced into the Northwestern United States over 100 years ago, but progress has been almost non-existent to date.

Contrasts between aquaculture and traditional wild harvesting are numerous. Aquaculture systems avoid some of the problems associated with open-access property regimes (Gordon 1954; Hardin 1968) because most aquaculture enterprises are privately-owned. In the "tragedies of the commons," fishers exploit resources beyond sustainable yields while overcapitalizing for bigger catches in the future. The boom that results from the intensification of fishing effort is quickly answered by the collapse of the natural environment. Inevitable declines in fish populations send fishers to dry docks and unemployment agencies. In theory, when fishers share the marine resources of a common property, they all rush to capture as much as possible in order to prevent others from landing big catches (Gordon 1954:135). In reality, however, there are numerous accounts of common property fisheries where fishers do not fall victim to selfish greed; instead, various cultural practices (Acheson 1988; McGoodwin 1990) prevent the over fishing and overcapitalization predicted by Gordon (1954) and Hardin (1968).

As a singular regulation strategy, privatization does not necessarily prevent over fishing. But when it is combined with other government regulations, such as gear and technology constraints, it can successfully force fishers to be satisfied with modest, sustainable profits in contrast with large, short-term profits (Gatewood 1993:134-136). Aquaculture systems, though private, also need size regulation. Although aquaculture does not exploit a common property resource, government regulation of plant size effectively controls against monopolization and overcapitalization. Aquaculture is still vulnerable to overcapitalization because it is possible that plants exceed the market demand of a product, creating a situation where increased supply may lower product prices, owners' profits, and workers' wages (Bjorndal 1988:140-141).

Analysis of Norway's exploding aquacultural production of Atlantic salmon demonstrates the gains potentially earned by fish domestication, while showing the dynamics involved in international trade and development. Norway's production of farmed Atlantic salmon increased at an annual rate of 47% between 1980 and 1986 (Bjorndal 1988:122), while capturing 80% of the global market for farmed Atlantic salmon (Dale, Owens, and Stenseth 1987:230).

The finite nature of any resource, and market, demands that constant growth

will eventually come to an end. Norway's government has taken some preventative measures, however, to limit overcapitalization, or "over fishing." State-issued licenses limit entry into the aquaculture industry. Combined with a limit on plant size, Norway's policies effectively establish a cap on the production capacity of the nation's salmon industry (Bjorndal 1988:125). Since much of the industry is dependent on export trade, the value of Norway's fish is contingent on other countries' abilities, or inabilities, to develop more productive aquaculture industries. In addition to the instability of international exchange rates and import tariffs, an overestimation of export trade will result in overcapitalization. There is still more demand for Atlantic salmon in North America, but Norway's commercial air cargo is insufficient for increased trade (Bjorndal 1988:141). Norwegian investment in cargo planes would seem too risky, however, considering the growth of Canada's aquaculture industry and potential of aquaculture in the United States. "If Pacific salmon ranching solves its current problems and achieves its enormous production potential, demand in the US market may no longer exceed supply" (Dale, Owens, and Stenseth 1987:235). Internally, Norway's industry prevents the overcapitalization symptomatic of a tragedy of the commons with caps on plant size. Norway's policies also prevent owners from holding the primary share of more than one plant to guard against the consolidation and monopolization of the industry (Bjorndal 1988:125). The limits of ownership in Norway's growing aquaculture industry raise the crucial issue of equity in the distribution of wealth in development plans. Norway's policy allows for a more even distribution of wealth, preventing consolidation of capital and profits into the hands of a few. This policy, though, is probably not the most efficient.

Thus, the aquaculture industry may find itself in a similar situation as agriculture -- a choice between heavily subsidized small production units or large-scale operations which funnel much of the cash flow out of the districts (Dale, Owens, and Stenseth 1987:238).

Small production units require more government assistance, particularly in the realm of research and development. In contrast, larger companies can often afford research ventures, developing without government help (Dale, Owens, and Stenseth 1987:237).

Environmental pressures select against large plants because they are more vulnerable to pollution and disease (Bjorndal 1988:136), but economic pressures select for consolidated groups of small plants. If a fisher owns only one stock that becomes infected with a disease that makes the product unmarketable, the fisher will be brought to his or her knees. Consolidated companies are more able to withstand occasional losses. It is possible, though, that the economic costs for a government to maintain small, independently-owned production units are less than the economic and social costs associated with consolidation. Consolidation, or rationalization, has the potential to displace workers (Crutchfield 1979; McCay, Gatewood, and Creed 1990) that will conceivably become welfare recipients, still

burdening common folk with taxes. If there is a choice between subsidizing small companies and paying for welfare programs, the decision is easy. The happiness of workers and more equitable distributions of wealth are the consequences of "suboptimal" economic plans, as defined by economists that ignore sociological effects of change.

The reality of development initiatives is not utopian, however. Analysis of the development of the tropical shrimp mariculture industry in Latin America and Asia shows that previously established hierarchies are reinforced with new industrial enterprises. Bailey recognizes,

Shrimp mariculture development of the type most commonly promoted by national governments and supported by international development agencies is oriented to large-scale enterprises rather than to small-scale producers. Local elites have the advantages of education and wealth which provide access to the knowledge and capital necessary to successfully adopt new production technologies (1988:37).

The interconnections of the political and financial elite guard against outsiders gaining access to new production technologies.

Smith's (1991) cross-cultural study of the patterns of concentrations of wealth reinforces the hypothesis that the rich benefit from development plans and the poor suffer. As Bailey (1988) demonstrates in the development of tropical shrimp mariculture, Smith's data support the conclusion that as "overall material wealth increases, the majority of the population becomes relatively less well off" (Smith 1991:59). Smith specifies that the "change in wealth concentration is for increasingly smaller percentages of the population to capture disproportionately larger shares of the wealth" (1991:59). The majority of people, which are relatively poor, do not have opportunities for involvement in development, except as laborers. The rich get richer, unless the new technology proves to be a failure. Even in these situations, however, the rich are usually able to absorb the loss until opportunities for further development are introduced. Smith notes that hyper, or extreme, inequality is found only in communities whose products are aimed towards external markets.

Capitalist economies are constantly seeking new methods to maximize profits. Whether it be more efficient technology or new, virgin markets, capitalists assume there is always more potential for growth. Considering the finite nature of earth, however, it would seem that the idea of "constant sustainable growth" is illogical unless extraterrestrial markets can be found. The tragedy of the commons does not occur when economies are geared for subsistence. While capitalism instills the idea of infinite need, effectively releasing exploitation from caps (McGoodwin 1990:63), subsistence strategies exploit resources only to satisfy the needs of local people. The social consequences of this shift in production strate-

gies are not this paper's focus, but it is worth recognizing that advocacy of small-scale independent companies is in conflict with the economics of capitalism.

The struggle between equity concerns and economic efficiency forces developers to be sensitive not only to the unique physical environments of target communities, but also to cultural environments. Fricke (1985) noted the need for the National Marine Fisheries Service to hire interdisciplinary teams of researchers in order to mesh the expertise of economists, biologists, and anthropologists into comprehensive plans suitable for different environments and cultures. Pollnac notes that "all dimensions are of equivalent importance" (1981:49).

The costs of suboptimal economic strategies must be seen in light of the social and biological costs of optimal economic plans. The Alaskan salmon fishery is an interesting arena for this battle between dollars and lives. Gatewood notes,

Company owned fish traps, which caught up to 70% of the salmon in a season, had become symbolic of the rampant absentee capitalism that drained away Alaska's resources with little or no return to residents (1989:89).

Efficient companies often ignore sociological effects of change and strive for maximum profit and minimum costs. Development plans, which focus on economic efficiency, distribute wealth unevenly (Smith 1991).

In contrast, the elimination of salmon traps in 1959 benefitted the local communities in several ways. More jobs were created since fishing requires more labor than guarding and retrieving traps. In addition, a new culture of "authentic fishermen" emerged with the establishment of the new jobs. The image of this culture helps supply Alaska with its third largest source of income — tourism (Gatewood 1989). Since tourism is not as limited to the finite nature of the earth's resources as fishing, one can conclude that the costs of traditional fishing are economically returned, if not exceeded, by the revenue generated by tourism.

Alaska's case is ideal for recognizing the relations among biology, economics, and fishing, but it fails to convey the complex dilemmas faced by most developers. Bailey notes that there have been significant biological and social costs for the development of tropical shrimp mariculture because "the primary motivations for shrimp mariculture development are foreign exchange earnings and profits" (1988:39). Social and biological costs are easily underestimated because it is difficult to translate the values of social and biological changes into the quantitative measurement of profits (McGoodwin 1990:158-160). In Alaska, the decision between people and dollars is legitimated by the fact that "inefficient" fishing is economically subsidized by tourism dollars. In other places, the rewards are not as tangible and often go unnoticed.

The dilemma between economic and social costs has no universal solution. Gatewood describes the ideal that "each fishery management plan reflects locally

appropriate compromises among conservation, efficiency, and equity concerns" (1993:138). If there are other job opportunities in a fishing community, there will be more interest in economic efficiency and less concern for employee displacement (Gatewood 1993:137). All developers, specifically aquaculture developers, essentially have the same concerns as wild fisheries managers. They seek to gain profit while being as least disruptive as possible to the local environment.

Cooperatives would seem to be an effective means of preventing the inequalities that Smith (1991) attributes to development schemes. Most development plans, however, favor consolidated firms, providing entrance and credit only for the elite (Pollnac 1981:24). Development of aquaculture, or any innovation, will generally produce greater intracultural stratification. Gatewood (1993:152) recognizes this effect of development within a country, but argues that global development will also lessen the variance of material wealth among nations if free trade is allowed. This trend towards relatively equal nations, each with internal stratification, would set the stage for a "true, world-wide class struggle" (Gatewood 1993:152).

Aquaculture has proven itself to be an effective method of harvesting fish, in addition to providing necessary supplements to wild harvests. In this respect, science has done its part to fulfill the Jeffersonian dream. The development of aquaculture, however, shares the problems associated with any development scheme. Although the presence of aquaculture will yield economic benefits, there is a need for developers to recognize the sociological and biological effects of their behavior and act accordingly.

The development of aquaculture requires government regulation in order to prevent increased stratification, overcapitalization, and the potential environmental hazards associated with aquaculture. Government regulation must not only prevent tragedies of the commons, but also tragedies of the common folk. Heavy subsidization of small-scale businesses is necessary to achieve the democratic ideals of Jefferson's dream. *Laissez-faire* policies not only maintain the status quo, but increase the division between the rich and the poor. Unless it is enforced by governments, rich people often reserve their help exclusively for other rich people because poor people have nothing of equivalent "value" to offer the rich. Just as the more successful "highliners" do not share information, or success, with the lesser "dubs" in the Maine lobster gangs (Acheson 1988:57), the rich are not compelled to share the fruits of development with the poor. Jefferson's dream of small-scale (fish) farms can be ruined by the piranhas of capitalism that are in constant search of higher profit margins. Government policies must effectively establish fences between the small farms.

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## Nietzsche and the Actor

Elizabeth Nordt

*All the world's a stage,  
and all the men and women merely players;  
they have their exits and their entrances,  
and one man in his time plays many parts.*

Shakespeare, *As You Like It*, Act 2, scene 7, 139-143

Whether or not Nietzsche would agree with these words of the immortal Bard is debatable. However, in either case he would be nauseated by the idea. Throughout Nietzsche's work he expresses contempt towards both the present state of humanity and the actor. It is therefore conceivable that linking the world and the actor as closely as the above quote does would concur with Nietzsche's conception of both.

Nietzsche uses the term "actor" most often as an insult to some party who has nothing to do with the stage. However, sometimes he means to refer to those whose profession is performing in the theatre. What is the connection between the actor within the theatre and the use of the same word as an affront to someone's character? Why does Nietzsche subject the actor to so much scorn? Is his disdain justified or a result of misunderstanding or fear? Can the actor play a positive role in Nietzsche's philosophical framework regarding themes such as eternal recurrence, will to power, and double-mindedness?

By examining the actor's role in the philosophical writings of Nietzsche, this paper will show that Nietzsche does not adequately account for all the facets of acting and the actor though he makes broad claims as to their harmfulness.

The world of theatre has its base in creating an artistic reality. This means transporting the audience from their everyday world into the world of the play for the purpose of education and/or entertainment. This juggling of realities is primarily the job of the actor. The ability to successfully carry an audience into the artistic reality is a sign of great power in the actor. This power is necessary and admired within the bounds of the theatre, but becomes threatening to the public when the actor leaves the theatre. Determining who is primary, at the core of the actor's being, can be confusing and frustrating to the average person because the actor has many characters inside her. It also frightens one to think that perhaps she is only made up of characters with no central core at all.

Nietzsche's disdain for the actor seems to be the result of his fear that characters might trick us by manipulating what we see as reality when we are outside the theatre and that there is no way to know who, if anyone, is behind the actor's mask. *Thus Spoke Zarathustra* has several examples of Nietzsche's feelings on actors.

Zarathustra introduces the actor in his speech "On the Flies of the Market Place" in Part 1. Here he expresses his fear that the actor is at least a distraction and sometimes an obstruction to those who seek overcoming themselves. The actor is described as having "faith in himself," "quick senses," and "capricious moods" (p.164). These qualities are all meant in their worst connotation. In reluctant acknowledgment of the actor's power, Zarathustra says "The actor has spirit but little conscience of the spirit" (p.164). He implies that the actor's talent and energy are spent amusing himself by fooling others.

In part four, Zarathustra encounters "The Magician" who proceeds to deliver a pitiful monologue. Outraged at the magician's speech, Zarathustra cuts it off by beating the man with his stick and shouting, "Stop it, you actor!" (p.367) as if acting is the worst possible conduct. He goes on angrily to question the perpetrator saying, "you sea of vanity, what were you playing before me, you wicked magician? In whom was I to believe when you were moaning in this way?" (p.368) The old magician goes on to reveal his malice by admitting to the pleasure he took in deceiving Zarathustra. The magician then confesses, "My art nauseates me; I am not great—why do dissemble? But you know it too: I sought greatness. I wanted to represent a great human being and I persuaded many; but this lie went beyond my strength" (p.369). It is this confession that distinguishes the magician from the masses and allows him to join the higher men in Zarathustra's cave. Zarathustra's questions and the magician's responses in this encounter clearly illustrate Nietzsche's fears and objections concerning the actor.

Although these fears are well founded, they show a certain misunderstanding of the technique of acting and the motivation of the actor and a denial of a fundamental part of human nature. Humans are complex creatures with many characteristics, some which are contradictory. Of the characteristics which are contradictory, one is always dominant and rules the behavior of the individual. In order for an actor to play a character, the actor must have the qualities of that role inside her, even if those qualities are recessive and do not show themselves in the actor's natural behavior. To play the role, the actor taps into the parts of herself with the character's qualities and allows them to dominate her being for the duration of the performance. The actor does indeed have a core being, or at least a basic hierarchy of characteristics which makes her unique. This may be all that any of us possess, but it is definitely enough to distinguish us as more than just our behavior.

In *Daybreak*, Nietzsche dedicates chapter 324 to the "Psychology of actors." Here he states that "Great actors have the happy delusion that the historical personages they play really felt as they do when they play them—but they are strongly in error."

Then he goes on to say that actors imitate only "the superficial in general" and "they catch the shadow of the soul of a great hero" but not his spirit. Nietzsche concludes the chapter by saying "the actor is no more than an ideal ape."

In addition to being highly uncomplimentary, Nietzsche's attempt at psychoanalysis is incorrect. A great motivation for the actor is this opportunity to explore his recessive characteristics for action in a non-threatening environment. It is invigorating and powerful to exercise one's passions in the controlled climate of the theatre. Nietzsche's idea that the actor's desire is to be a great and powerful character is quite exaggerated. A pathetic character can be just as challenging and desirable a role for the actor to play as an historically heroic character. The actor does not claim to know everything about the internal structure of the person his character is based on, but would rather use the character as an opportunity to learn more about himself. When a historical figure dies and is scripted as a character, his internal structure dies too and all that remains is a skeletal framework represented in the dialogue. From this the actor creates a character out of himself. The internal structure of the character is the actor, and whether or not it is the same as the figure it is based on is not a primary concern. Once a character based on a human is made that human becomes secondary to the character created.

There is truth in the idea that the world is a stage and all human beings are actors. Everyone continuously modifies those characteristics which are dominant depending on who is in their company and what the particular situation is. We all use the techniques of acting in our daily lives and social relations. Consciousness of this and refinement in this are what define an actor. With this understanding, we see the validity of the previously quoted Shakespearean lines.

To give Nietzsche the benefit of the doubt, we could assume that he is aware of this aspect of human nature, and it is the technique of acting which sickens him most. Since Zarathustra is nauseated by what has become of humanity and using this form of acting is common to us all, perhaps it is acting that causes his nausea. One consideration that must be made with this analysis is Zarathustra's own actions. He, too, behaves differently depending on his company. We see distinct shifts in his conduct relating to whether he is by himself, in solitude, with his animals, with a crowd, or with each of the individual higher men. Zarathustra never claims to be the overman, however. Perhaps as his nausea lessens and he leaves the higher men to move closer to the overman he abandons the practice of acting. Nietzsche does not account for what this would involve or what the new mode of living without acting would be.

Using this rendition of Nietzsche's philosophy leaves little room for merit in the actor. His analysis of the actor is prejudicial and incomplete. If we disregard his direct references to the actor and independently apply the concept of acting as a theatrical profession to some of his theories, such as eternal recurrence, will to power, and virtue as self, the actor can play a surprisingly positive role, which Nietzsche fails to see.

The theatre can be seen as an observable example of eternal recurrence. Scripts create characters which live outside of time and are born, act and die the same way an infinite number of times. Although it is not the actor herself who lives this, she is necessary to continue this eternally recurring pattern, and, to a certain extent, she experiences it. For each performance, the actor must say "YES" to this process and agree to undertake the embodiment of the character again, including all the triumphs and tribulations, and sometimes deaths that this involves. The theory of eternal recurrence is much easier to understand and accept for the actor, who would be happy to live and die as Hamlet a thousand times, than it is for the standard human.

It might be argued that it is false to compare the repetition of performing to that of eternal recurrence, as any actor will claim that no two performances are ever alike. This claim is correct. Since the actor is playing a role and can only be the character in a limited sense, there are variations each time the role is played. The comparison holds however in the understanding that in every genuine performance, a certain minimum level of the character's spirit consistently remains in the actor. It is this quality that gives the actor a grasp of the concept of eternal recurrence. Although grasping and accepting are not the same, understanding is a necessary first step towards acceptance.

The actor also embraces Nietzsche's theory of will to power as necessary for all action and a truth for the stage. All relationships between the characters in a play are based on power, and this is understood by the actor. Conflict is the heart of drama and without it drama dies. Power struggles are the root of all conflict. In rehearsing for a performance, power relations that are not clearly defined and understood are discussed. Improvisation and experiments take place to discover where the power lies in a situation and how it is utilized. Before this can happen a more fundamental realization and application of will to power must take place within every actor.

The basic philosophy of will to power is that whatever lives obeys either itself or others, and the strong are masters of themselves, which is the goal. The actor must be a complete master of herself, both physically and mentally. She is her instrument, the only tool of her trade, and she must master the use of that tool to do her job. By knowing both the potential and the limitations of body, mind, and emotions and how to utilize them, the actor creates a character. The physical, mental and emotional makeup of the character must be unified. Theories of acting are the various methods as to how one accomplishes becoming a character. They differ in what aspect should be focused on to begin the transformation. If any part of the actor is not under her own control, inconsistencies and flaws develop in the character.

Words such as "transformation" and "becoming" in reference to the relation between the actor and the character emphasize the instinctive judgment that acting involves a certain double-mindedness, which is opposite of Nietzsche's aim

for virtue as self. This conception of the actor as double-minded is a natural assumption which has some relevance but is not as accurate as it seems. In actuality, the actor, when playing a character, is remarkably single-minded. On the stage everything the actor does is for the character, who is the actor. Every character on stage has a personal objective which they do everything in their power to obtain. In an ideal performance, single minded pursuit of the character's objective, for its own sake, is the only thing that matters to the actor. Under normal circumstances even this single goal would be double-minded since there is a goal distinct from the one pursuing it. In the theatre, though, the character is made up of his pursuit and obtaining his goal can never happen. Theatre is action and if the goal is obtained there is nothing left to do and the character dies.

Nietzsche even recognizes the need for an actor to be single-minded to successfully perform. In *Daybreak*, chapter 533, a rare complimentary passage about actors, he speaks of a mistake sometimes made by actors when they lose single-mindedness. "The actor is surprised by his own inventiveness on the stage and then spoils it through being surprised." The actor ruins his creation by separating the character from himself and becoming double-minded in that one moment of surprise.

This passage also contains insightful praise for the actor. Nietzsche begins saying "How much an actor sees and divines when he watches another act!" and ends with "If only we possessed the eye of this actor and this painter for the domain of human souls!" (Nietzsche, *Daybreak*, chapter 533) Unfortunately he does not keep in mind the merits of acting during most of his writings.

The actor is clearly not a high priority in Nietzsche's work, however the word "actor" appears in various contexts which should be examined. The actor, meaning the theatre professional, is far from the weak and lowly individual Nietzsche addresses when he yells "you actor." This person embodies the fears that Nietzsche has over the misuse of the power that an actor possesses.

Nietzsche has less to say about the stage actor, who is the paradigm for all uses of the word "actor." He calls the actor "an ideal ape," yet he admires the control and powers of concentration that the actor needs. When looking at Nietzsche's central themes and relating them to the actor, one can see that the actor is very close to fulfilling Nietzsche's requirements for moving towards the overman.

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## Brazil and Argentina in The New World Order

*Jeff Goldman*

### Preamble

Brazil and Argentina are two countries which have played and can continue to play a significant role in the New World Order which has emerged since the fall of the Soviet Empire. The following paper is concerned with defining what these roles are and what they could be.

First of all, this paper will define the primary aspects of the New World Order. Secondly, it will attempt to extract a definition of the New World Order and apply parts of it, where necessary, to the roles of Brazil and Argentina in current international situations. In addition, the future roles of Argentina and Brazil will be discussed.

### Section I: Defining the New World Order

The New World Order entails an international system free of the US-Soviet cold war conflict. International interactions are defined very differently than they were in the former bipolar world. The New World System involves several characteristics which influence and define each other. The New World Order involves such features as: the restructuring of the North-South divide; the role of technology and post-industrialized nations; the emergence of more open economic trading agreements and "blocs"; the modification of the military; the role of the United States as a hegemonic power; the triumph of democracy; and, finally, elevated concerns over the environment and human rights.

Much of the domestic and foreign policy which concerns Latin America revolves around its efforts to industrialize. Thus, when trying to define a New World Order with a special interest in Latin America, an important aspect is the relationship which exists between the industrialized nations and the developing world. This relationship, known as the North-South gap, is becoming increasingly complex. Celso Lafer, former foreign minister of Brazil, discusses this new relationship eloquently:

The North South issue ceased being just a kind of levy by the South on the North, socialist as well as capitalist, for financial and technological resources and more cooperation in development. Now, there is also a levy raised by the North on the South, for more respect of human rights, for

preservation of the environment, and for commitments to the non-proliferation of weapons of mass destruction and extending to the war on drugs, and to free markets. (Lowenthal and Treverton, 226)

An important aspect of the increasingly complex relationship between the developed and undeveloped worlds is that the gap between the two is becoming less pronounced. As Celso Lafer points out, the South is not only dependent on the North but the North is becoming increasingly dependent on the South: "The third world is now an engine for growth in the rich world."<sup>2,10</sup>

One way in which the first world benefits from the third world is that the billions of consumers in the developing world can provide a very large market for first world products. If many of the developing countries grow as predicted, their people will be able to purchase more first world goods.

The New World Order, as opposed to the former bipolar order, will be epitomized by an increase in international economic awareness and a decrease in the military and political awareness so typical of the former U.S.-Soviet relationship. "Over the next 25 years, the world will see the biggest shift in economic strength for more than a century.... Scores of countries in the third world and the former Soviet block have embraced market-friendly economic reforms and opened their borders to trade and investment.... Now...more than three billion people in Asia, Latin America and Eastern Europe are joining the rich world's one billion or so in the market economy club."<sup>1,2</sup>

What effect will the continued economic growth of the third world have on the world system? According to World Bank figures, the so-called developing countries will grow by about 5% per year, whereas, developed countries will grow by 2.7% per year.<sup>2,3</sup> "This matters more than it did, for such countries now account for half the world's economic output."<sup>3,4</sup> By the year 2020, the 15 largest economies will include countries such as Brazil, Mexico, India, Thailand among other nations often labeled as being part of the third world.<sup>2,4</sup> For countries that are currently dominant economically, like the United States, this could have domestic repercussions. For example: "Chinese and Indian workers are willing to accept an average wage of little more than 50 cents an hour, compared with average hourly labor costs around \$18 dollars in developed country."<sup>2,4</sup> Ultimately, the gap between wages in developed and currently underdeveloped countries will narrow as employers do more business with workers who are willing to accept lower wages; thus, producing increased competition. Increased competition in the work force will lead to a reduction in the number of unskilled laborers. It follows that the percentage of educated workers has increased and will continue to increase. In addition, "low skilled workers are right to be worried. There is a risk...that widening inequalities between winners and losers could create social and political tensions. Pressure by workers could influence governments to protect the industries which are subject to be affected."<sup>2,6</sup>

Overall, the economic development of the third world will help relieve poverty in those countries, which in turn will increase political and social stability. This will ease the minds of bankers and businesses who want to invest. This will, at the same time, create a complicated world in which economies are interdependent on each other.<sup>32</sup>

The outlook seems positive overall for the world economy, but one can never be too sure. A particular concern rises over the growing prices of commodities, such as oil, which are heavily consumed by the energy thirsty countries. Could this ultimately lead to another rise in oil prices which would in turn stunt growth? In the past, "every flowering of the world economy, however beautiful, contains the seeds of its own destruction. If resolute action is not taken to hold down inflation, this flower could begin to wilt even before many onlookers have realized it is there."<sup>33</sup>

As countries begin to invest more money in each other, open up trading barriers, and expose markets to foreign companies, the world will become inextricably interlinked. Moreover, a second characteristic of the New World Order concerns the emergence of post-industrial societies and how they will affect the role technology plays in relation to a nation's economic status in the international system.

"Technology has become the most decisive factor of production" (Lowenthal and Trevorton, 54). The economic importance of being technologically competitive will result in a continually increasing need for highly educated workers, scientists and technologists. However, this developing dependency on technology for a country to remain economically competitive will induce restrictions on the accessibility of knowledge. "Today, access to applied and applicable knowledge is often restricted by large multinational corporations, protected by patents and legalized secrecy" (Lowenthal and Trevorton, 55). In this way, countries will still be engaging in exercises similar to the imperialistic periods of the past. Yesterday, countries raced with each other to establish colonies from which resources could be extracted. Today, countries are racing to extract knowledge to develop the newest technology.

A third definitive component of the New World Order concerns the development of economic blocks such as European Community. The purpose of such "megamarkets" is to increase the efficiency, productivity and competitiveness of the economies of countries which are members of the particular economic block organization. Megamarkets do this through the establishment of free trade among the member states to give each state access to large markets and better conditions for development. "The resulting benefits will improve quality and reduce costs and prices for the advantage of both members and nonmembers of the megamarkets alike" (Lowenthal and Trevorton, 55). However, systems truly free of trade barriers will develop very slowly since countries will still be interested in protecting their own products.

For approximately forty years, the world operated under a tense arrangement

of military and political anxiety. Prior to the fall of the Berlin wall, which we might take as a symbol of the end of the cold war, the world had been fundamentally carved up by the United States and the Soviet Union. Tremendous amounts of money were deposited in the defense budgets of these two countries trying desperately to out muscle each other. The emphasis on military positioning, military strategy, nuclear arsenals, and so forth, created a situation in the world in which no action seemed free of some sort of militaristic reverberation by one of the two dominating powers. It seemed as if any two parties in conflict anywhere in the world were funded or supported militarily by the opposing forces of the United States and the Soviet Union. The rest of the world was a chess board in a game of international dominance.

Although this is a somewhat exaggerated depiction, overlooking other factors that had influence in the international system, the two dominant forces did create a situation in which the military was very important. With the fall of the Soviet Empire, the possibility of major war has been significantly diminished (Lowenthal and Treverton, 16). There are no two powerful nations racing to build up the strongest defense in the battle between democracy and communism. Other countries will no longer be looked at by the larger powers primarily from the standpoint of military positioning or value. Moreover, other governments will no longer be able to play the two dominant powers against each other for the sake of receiving military support or economic benefits. In effect, a new relationship has and will continue to develop between the states of the international system — a relationship in which military influence will not play as large of a role as it once did. The role of military in the world will decline because there is less need.

An additional feature of the New World Order is the concept of the emergence of the United States as a single dominant power or hegemony. This is arguable, however, depending upon the definition of power. Economically, one might argue that the United States is one power amidst several other states. However, it is hard not to accept the United States as having extensive military strength and a cultural grip on the rest of the world — more so than any other country. When there was a USSR there was an opposing force which prevented United States influence from reaching certain areas of the world. Now, however, there is arguably no state capable of exerting influence to the degree the United States can with its military and culture.

A defining feature of American culture pertains to its democratic ideals and tendencies. Concern over values and morals arises when searching to define the New World Order. Put simply, democracy triumphed in the cold war under the leadership of the United States. Its principles and ideals will continue and increasingly influence the political shape of the world. "Democracy increases the backing of a nation's people for international negotiations and confers international credibility on the country. Democracy provides indispensable legitimacy at a moment when this political value is attaining near universal acceptance"

(Lowenthal and Trevorton, 225).

Could the spread of democracy in the post cold war international system correlate with an increased concern over substandard living conditions in third world countries. This area incorporates the environmental concerns which affect everyday lives. "The protection of the biosphere and the whole complex of ecological requirements, the preservation and enforcement of peace in the areas of regional conflict, health, sanitation, free communications and transport, basic education, human development, international control on drugs and crime, collective resources — all these issues demand an effective and equitable world administration, transcending national frontiers and sovereignties" (Lowenthal and Trevorton, 55). With respect to the environment, in particular, conflict arises between environmentalist groups and governments who want their countries to be industrialized. As third world countries continue to develop, there will be mounting concern about the effect energy consumption will have on the environment.<sup>2,10</sup>

Just as the increased awareness of the environment comes into conflict with economic growth, all aspects of the new international system are interrelated with each other. Each characteristic described helps to define the other characteristics. This is important to remember when trying to understand why states behave the ways they do and why the current system of international politics has evolved in the way that it has.

## Section II: Brazil and Argentina in the New World Order

Brazil and Argentina have always been very promising countries in terms of economic potential. They are the two largest countries in South America, with access to vast natural resources and strong labor forces. Although growth has been stunted by awkward policies in the past, recent success on the part of both countries has earned them the designation as "Big Emerging Markets" by the U.S. Commerce Department.

Rich in natural resources, a relatively well educated labor force, an export-oriented agricultural sector, and a wide spread industrial foundation, Argentina was at one time "the world's seventh richest nation."<sup>5</sup> Despite these natural endowments, in the late 1980's decades of mismanagement had driven the economy into virtual turmoil with huge external debts accompanied by periods of hyperinflation. In 1989, Carlos Menem was elected president in the depths of recession. In implementing his comprehensive economic restructuring programs, Menem managed to steer Argentina onto a seemingly stable path of growth.<sup>4</sup>

At the end of 1993, inflation had fallen to its lowest level in 30 years. In addition, between 1991 and 1993 cumulative gross domestic product growth was 25 percent. For this same time period, industrial output grew approximately 12 percent. For 1993 alone, GDP growth was an estimated 6 percent and exports grew about 7 percent. Dramatic strides in economic performance have been definite. "To anyone who was in inflation-ravaged Buenos Aires five years ago and who

now visits again, the progress is stunning, almost unbelievable. This city has regained its luster..."<sup>5</sup> Despite the recent success of the Argentine economy, future stability is not certain. "Much remains to be done in the 1990's in dismantling the old static barriers to growth and in solidifying the recent economic gains."<sup>4</sup>

Brazil has made somewhat less consistent economic progress, but considerable progress none the less. The country's economy, with large agrarian, mining, and manufacturing sectors, entered the 1990's with declining real growth, a huge foreign debt of \$122 billion dollars, a lack of policy direction and rampant inflation. In addition, Brazil's economy was maintaining a highly regulated, inward-looking, and protectionist policy despite reform attempts by Presidents Collor and Franco.<sup>6</sup> "The three cruzado plans of the 1980's failed to halt three centuries of inflation...nor did Collor de Mello."

However, trade liberalization has taken place. During the late 1980's and early 1990's, Brazil started reducing trade and investment barriers because they recognized the need for "access to world markets." As import barriers declined, Brazilian imports, as well as exports, increased. In 1993, Brazil's total foreign trade reached a new peak of \$64.49 billion dollars, up 14% from 1992. "Both imports and exports posted record levels during 1993, with imports amounting to \$25.71 billion and exports reaching \$38.78 billion." According to *Business America*, "Brazil is the biggest of the Big Emerging Markets in this hemisphere, the country with the largest land mass, the largest population, the largest gross domestic product, and the deepest and most sophisticated scientific and technological base..."<sup>7</sup> Thus, despite its precariousness, Brazil is definitely an economic force to be reckoned with.<sup>7</sup>

Recently, Brazil's inflation rate dropped dramatically as a result of former finance minister Fernando Cardoso's anti-inflation plan. In June 1994, consumer prices were rising at nearly 50% a month. In October, at the time in which Cardoso was elected president, consumer prices were rising at less than 2% a month. However, this does not necessarily mean that Brazil is on a clear path to success. According to Eduardo Giannetti, an economist at the University of Sao Paulo: "The blood, sweat and tears [of his anti-inflation plan] still lie ahead." And journalist Mariana Crespo said of Brazil's potential for economic success: "It will happen if the politicians don't screw it up."<sup>9</sup> Hence, fundamental elements of the Brazilian economy must be altered if the country is to reach its true potential: "If [Cardoso's plan] succeeds, the rewards are great: Brazil, with its diverse manufacturing base, healthy foreign reserves and hefty trade surplus, is poised for years of growth."<sup>10</sup>

Carlos Menem and Fernando Cardoso share the similar experience of being responsible for taming inflation and igniting growth in problematic economies. Both Argentina and Brazil are expected to grow at a rate of around 5% unless disaster strikes.<sup>9</sup> Thus in an effort to establish a stable direction on the road to economic success in the New World Order, Brazil and Argentina have been working, together with Paraguay and Uruguay, to formally institute a free trade area

called MERCOSUR. The plan began to form in 1986 when President Raul Alfonsin of Argentina and President Jose Sarney of Brazil signed a series of protocols with the purpose of promoting economic integration. Goals for these protocols included the strengthening of trade preferences, the removal of non-tariff barriers, and the introduction of new projects involving technological cooperation, integrated programs in sectors such as capital goods and wheat, and mechanisms for the financing of trade promotion. In the first year of the integration program with Argentina, trade grew by 40%. However this performance was not repeated in following years and a number of the specific measures did not produce desired effects. For example, after 1986, Brazil's wheat imports fell below 1984-1985 levels, in spite of the fact that the object of the protocol had been to expand them. A series of other letdowns of the protocols led to their overall failure. However, the protocol agreements brought about cooperative relations between two countries which had historically been very competitive rivals. Internal problems did much to prevent the programs for integration from working. During the period of 1986 to 1990, these two countries were still trying to make repairs on damages created by the debt crises. Thus, it was particularly difficult for Argentina and Brazil to commit to plans which opened up and exposed their unstable economies. In an effort to preserve political gains made by the protocol negotiations, Presidents Alfonsin and Sarney signed the Buenos Aires Act in 1988 stipulating a ten year deadline for the formation of a common market between the countries. Then, on July 6, 1990, President Menem of Argentina and President Collor of Brazil renegotiated the deadline for creating an integration policy. "They scheduled the date of project conclusion for December 31, 1994, a full four years earlier than the original deadline; they agreed that tariff reductions would be linear and generalized; and they signed the Treaty on Binational Enterprises."

To clarify, the Treaty on Binational Enterprises guarantees "that firms whose majority stock lies in Argentinean or Brazilian hands will be treated as national firms on both sides of the border." One particular effect of such a treaty is that it causes more business organizations to be in favor of integration. The ratified version of the Buenos Aires Act was broadened on March 26, 1991, when Paraguay and Uruguay signed the Treaty of Asuncion stating that a Southern Cone common market, MERCOSUR, would come to be by the end of 1994. The Treaty of Asuncion called for the addition of two commitments to the Buenos Aires Act. For one, it provides for the free circulation of goods, services, and productive factors between these nations. Second, it called for the harmonization of pertinent laws and regulations to ensure the achievement of the first goal.<sup>11</sup>

The South American trading block, MERCOSUR, intends to create a common market for the member countries of the southern part of Latin America and currently includes Brazil, Argentina, Paraguay and Uruguay. On August 5, 1994, the presidents of the four member nations signed twelve trade agreements that set terms for a common market that would take effect between the countries January 1, 1995.

The overall accord calls for the virtual elimination of tariffs on 85% of the trade tariffs between MERCOSUR nations and a common tariff structure on goods imported from other countries.<sup>12</sup>

There are several advantages for Brazil and Argentina in their involvement with MERCOSUR. For one, MERCOSUR will expose member countries to a market of approximately 200 million people, most of whom are Brazilians. Secondly, MERCOSUR provides the means and the medium for Brazil and Argentina to engage in joint ventures and cooperation in areas such as technological development. For example, Brazil and Argentina both have significant scientific establishments; however, the countries lack sufficient experts and funding. Cooperation between the two countries could solve these problems and lead to joint research efforts that would benefit both countries. An example of this might be to develop their expertise in nuclear energy. As expressed before, technology is very important for a country's competitiveness in the world economy. Because of this, MERCOSUR members are very interested in increasing their own research capabilities (Lowenthal and Treverton, pg. 60).

As explained by Helio Jaguaribe, one of Latin America's leading social scientists, MERCOSUR can assist in giving Argentina and Brazil more leverage in the arena of international negotiation: "In a world of regional megamarkets that are supported by a powerful international trend toward trade liberalization, even as they are territorially protected by essentially mercantilist policies, isolated countries are likely to suffer. [MERCOSUR] will also provide substantive reinforcement to MERCOSUR members for the renegotiation of their foreign debt" (Lowenthal and Treverton, 61).

Although government seems to be playing the role of administrating MERCOSUR, it is the businesses of Argentina and Brazil that "are the real drivers in the overall process of convergence."<sup>13</sup> M.V. Pratini de Moraes, chairman of Brazil's Foreign Trade Association, criticized the Brazilian government as being second to Brazilian business owners: "We don't give a damn about Brasilia. We run the country."<sup>14</sup> Thus, the business community sees itself as playing a very important role in "fomenting integration" in the Southern Cone. In reality, MERCOSUR is coming about by the hybrid cooperation between the businesses and governments of southern Latin America.<sup>15</sup> Given the historically erratic behavior of the economies of Brazil and Argentina, it is difficult to predict the effects of a common market among the southern cone countries. Some economists, like Jose Tavares de Araujo, Jr. of the Operations Department of the Inter-American Development Bank, see the plan as hastily put together: "[Given the instability of their economies], it will be impossible to thoroughly harmonize economic policies within four years....Brazil and Argentina's hurry-up attitude has been a pointless attempt to protect the project's credibility by keeping it in the headlines. It is also a repetition of innumerable other efforts that have in the past helped to discredit the idea of Latin American integration—a proposal that has for decades been a victim of inconse-

quential government rhetoric" (Note 11, 105). Despite such philosophical challenges to MERCOSUR, the date for initiation still remains for January 1, 1995. On November 3, 1994, Brazilian president elect Fernando Cardoso said that "there was no possibility that the MERCOSUR would be postponed.<sup>13</sup>

For Brazil and Argentina, the New World Order calls for the alteration of economic policy as well as foreign policy. The fall of the Soviet empire that there would be less of a need for military strength and arms of mass destruction. Although there are countries deeply motivated to acquire chemical, biological and nuclear weapons, the two major adversaries of the cold war are on more friendly terms and the world as a whole seems to have taken a disinterest in nuclear programs. Argentina and Brazil are no exception. At one time, both of these countries had regimented programs to develop nuclear weapons and both had been named "among the most likely potential nuclear powers."<sup>14</sup> However, both countries have taken measures suggesting abandonment of any project to acquire weapons of mass destruction. In 1967 a treaty made at Tlatelolco in Mexico declared Latin America to be a nuclear-free zone and all countries would be open to inspection by the International Atomic Energy Agency. Two Russian sympathizers, Cuba and Guyana, did not take part in the treaty making. "The Tlatelolco deal was struck largely because the signatories wanted help from the United States in developing peaceful nuclear programs." However, Brazil and Argentina's anti-American military rulers wanted to "buy themselves status by making nuclear deals with other third world regimes." In addition, the Brazil-Argentina rivalry was manifesting itself in the form of nuclear development. Each country wanted the upper hand in South American dominance so, despite signing the treaty, the development of secret nuclear weapons programs was initiated. Later, however, the democratically elected President Raul Alfonsin of Argentina and President Sarney of Brazil tried to ameliorate the relationship. The two Presidents began discussion of joint "nuclear-weapons schemes," inviting each other to visit respective secret installations. In the early 1990's, President Carlos Menem of Argentina and President Fernando Collor of Brazil stopped the secret nuclear projects, promising to obey the IAEA and Tlatelolco rules. However the two countries continued to engage in nuclear talks and visits by "inviting each other's specialists to drop in as often as they wanted" in an effort maintain friendly relations. These gestures of openness, though, are not seen across all aspects of international decision making. In fact, Brazil and Argentina choose very opposite paths when it comes to many international situations.<sup>15</sup>

An organization known as the Rio Group is seeking to establish political unity among Latin American nations. However, its efforts have been "jeopardized" by the so called "leadership struggles" between the two largest countries in South America: Brazil and Argentina.<sup>16</sup> Brazil, on the one hand, has tended to adopt policy independent of the United States. One particular issue concerns the U.S. economic embargo on Cuba. Brazil had been interested in allowing Cuba to rejoin

the Caribbean-South American community and helped to persuade the Cuban government to go along with the Tlatelolco Treaty which bans nuclear arms in Latin America. At a recent UN summit, Brazil voted for a resolution aimed at ending the tough United States economic embargo against Cuba.<sup>16</sup>

With respect to Haiti, Brazil expressed opposition toward armed intervention by the United States to establish Jean Aristide as the democratically elected president. In a vote of the UN Security council, Brazil abstained from voting measures to end trade embargoes in Haiti with the return of President Aristide.

In addition, Brazilian leaders may have been trying to declare independence from the West through recent discussion and signing agreements with Russia. Recently, leaders from Brazil and Russia signed agreements concerning political partnership, combating drug trafficking, cooperation in nature development and the abolishment of quotas to limit the number of Russian diplomats in Brazil. While these issues have generally been expressed more often as Western concerns, it is almost a declaration of independence for Brazil to be negotiating confidently with the former Soviet country.<sup>17,18</sup>

While Brazil favored the lifting of the embargo on Cuba and opposed armed intervention in Haiti, Argentina has had "strong positions against Cuba and the Haitian regime" and, in general, has had more Western tendencies with respect to recent foreign policy. In the Persian Gulf war, President Carlos Menem declared the end of Argentina's "pacific" neutrality and its "alignment with the West" by dispatching a destroyer to join the blockade of Iraq. Argentina was the only Latin American country to send troops and warships to help in the war for Kuwait. In addition, Argentina contributed soldiers to the United Nations force in Croatia.<sup>19</sup>

Argentina, therefore, seems to hope for benefits through a strong alignment with the West, while Brazil hopes to make its mark through its more independent assertion of foreign policy. It is possible that Brazil chose a more independent path of foreign policy in order to express and ramify the Brazilian government's interest and capability in being a world leader on the United Nations Security Council. Along with Japan and Germany, Brazil is a leading candidate for becoming a member of the organization because of its size and historically significant role with the UN. Currently, the Security Council consists of the United States, Russia, China, France and Great Britain. If Brazil became a member, it would not only be able to represent Latin America in world affairs, but it would also be able play a significantly larger role in the realm of peace keeping and international conflict.<sup>20</sup>

As the world enters an era in which human rights are of increased concern, Argentina and Brazil seem to be, once again, on somewhat dissimilar paths. In Brazil, extrajudicial killings continued to be the principal human rights problem at the close of 1993. At least several hundred Brazilians die annually as a result of extrajudicial killings committed by various elements, including vigilante groups, landowners and their agents, invaders of indigenous territories and police. Ob-

struction of justice by local elites and widespread public apathy contributes to Brazil's climate of impunity — where, in killings of most criminal suspects, street children, rural labor leaders, and indigenous peoples, those responsible are rarely brought to trial or convicted. However, there are examples of progress in Brazil with respect to human rights. For example, in November of 1993, two police raids were organized against houses of prostitution in gold mining camps, where young girls were held forcibly. In addition, the indigenous people of Brazil are generally taken advantage of. However, a small victory in Indian rights occurred when a federal judge mandated that a timber merchant compensate the Nhamiquara Indians for wood valued at \$40,000 dollars which had been taken from an Indian reserve in the state of Mato Grosso. Also, a well known example of police brutality is in their alleged systematic killing of street persons in Rio and Sao Paulo. Police killed 1,470 individuals in "confrontations" in 1992 in Sao Paulo. However, that rate dropped to 409 killings in 1993. These are important examples of human rights progress in Brazil. Nevertheless, examples of human rights protection are often very isolated. For the most part, human rights are denied to the poor. But, if Brazil wishes to earn respect as a world leader and South American leader, much needs to be done to improve itself in this area.<sup>21</sup>

For the most part, Argentina has had more success with human rights than Brazil in recent years. Nevertheless, many occurrences of government failure to punish human rights violators, along with institutional weaknesses have resulted in a failure to fully protect individual rights. Significant progress has been made since the days of the "Dirty War" in which police abducted and murdered thousands of citizens. Recently, the Argentine government has generally promoted the international and nongovernmental investigation of alleged violations of human rights — more so than Brazil. For example, the Ministry of the Interior has an Under-Secretary for Human Rights. The Ministry organizes special courses on human rights to help control police abuses. In early December of 1993, the ministry established a national people's defender. Another example of the Argentine government's dedication to human rights was expressed when it created the National Women's Council in 1991 to develop and coordinate women's policies. With respect to children, Argentina has traditionally been a leader in programs to provide public education, health protection, and recreational services regardless of class or economic status. However, economic problems of the not so distant past have made it somewhat difficult for Argentina to live up to these standards.<sup>22</sup>

Because Brazil and Argentina are moving towards full industrialization and development, they often find themselves at the heart of international concern over the environment. For Brazil, a lot of environmental issues pertain to the country's destruction of the Amazon rainforests. The general argument that Brazil makes is that fully industrialized nations also engaged in deforestation at one time in order to develop. Because the majority of the Amazon lies within the borders of Brazil and because the rainforest is considered to be an essential component of

the world ecosystem which can not be sacrificed for Brazil's development, many programs have been adopted and suggested to dissuade Brazil from deforestation. For example, USAID provided approximately \$2.5 million every year for the Global Climate Change program to reduce Brazil's environmentally hazardous policies in destroying the Amazon Rainforest. The GCC program promotes the formation of ecologically as well as economically sustainable policies and activities to manage forest resources in Amazonian States. Thus, with its Amazon Rainforest, Brazil has an asset for international leverage.<sup>23</sup>

In Argentina, new "Green rules" have forced companies to alter policy. With recent reforms to the constitution, environmentalists have the legal power to stop projects that conflict with environmental interests. Relatively recent international concern over the environment will continue to have an impact on economic policy and, to some extent, foreign policy.<sup>24</sup>

One must infer that each of the formerly described characteristics of the New World Order impacts and influences each of the other characteristics in some form or another. A general theme which emerges is that domestic policy often determines a country's foreign policy just as foreign policy may determine economic policy. In addition, environmental and human rights groups also influence state behavior. But, there are also an infinite number of other elements which states take into account when making decisions and it would be virtually impossible to consider them all. Consequently, it is very difficult to determine what will happen to Argentina and Brazil — two countries which currently show a lot of economic promise in a world of integrated economies and diminished military roles. The U.S. Department of Commerce lists these two countries as "Big Emerging Markets," and indicators predict that these two nations will continue to grow steadily at around 5%. In addition, Argentina and Brazil are playing increasingly larger roles in the arena of international policy and negotiation. If MERCOSUR succeeds and if Brazil becomes a part of the UN Security Council, the region dominated by these states will play an even more significant role in the international system. In addition, Brazil and Argentina are in positions to become intricately involved in matters concerning human rights and the environment.

In conclusion, it may be said that the two largest countries in South America still have great potential. Development does not seem nearly as distant as it did amidst the debt crisis in the 1980's. But, the future has looked bright before for these countries. Broken promises have plagued the development of Brazil and Argentina. And while confidence in policy is important, the governments of Brazil and Argentina must be honest and resolute if true progress in the New World Order is to be made.

### Endnotes

1. These characteristics were formulated primarily through my assessment of the ideas discussed in class and read in the book *Latin America in a New World* edited by Lowenthal and Trevorton, 1994, Westview Publishing. Throughout this section of the paper, I shall refer to information from *Latin America in a New World* by denoting (Lowenthal and Trevorton, page number).
2. These notes refer to an article in the October 1, 1994 article in *The Economist* called "War of the Worlds." For information from this source, I will write (Note 2, page number).
3. This refers to an article in the June 14, 1994 *Foreign Report* called "The Coming World Boom." I will denote note 3 as I do note 2.
4. This refers to the Central Intelligence Agency *World Factbook* which can be found on Internet. The subject is Argentina.
5. This refers to an article by Randy Myc in *Business America*, May 1994, "Argentina: A Growing Economy Currently in Transition." Pages 14-16 and another article on page 6.
6. This refers to the Central Intelligence Agency *World Factbook*. Subject: Brazil.
7. This refers to an article by Horace Jennings in *Business America*, "Brazilian trade Sets New Highs as Import Barriers are Lowered," May 1994. Pages 16 to 17 and article on page 7.
8. *The Economist*, January 25, 1994. Pages 76-77.
9. By Mariana Crespo. *Financial World*, "Sleepless in Sao," June 21, 1994. Pages 52 - 70.
10. This refers to an article in *The Economist*, October 8, 1994. Page 42.
11. Tavares de Araujo, Jose. *Brazil and the Challenge of Economic Reform*. "Industrial Restructuring and Economic Integration: The Outlook for MERCOSUR. Pages 95-119. The Johns Hopkins University Press. 1993.
12. *World News Digest*, September 8, 1994. Page 630.
13. Reuter Textline BBC Monitoring Service: Latin America, November 7, 1994. From Lexis/Nexis.
14. Lowenthal, Abraham. *Partners in Conflict*. Johns Hopkins Press. Baltimore, 1990.
15. "The Latin Safety network," *The Economist*. March 14, 1992.
16. Reuter News Service- Western Europe, October 26, 1994, "United Nations: Breakdown of UN Vote Against US Embargo on Cuba Body."

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18. Federal News Service. October 19, 1994. From Lexis/Nexis.
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20. Federal News Service. September 28, 1994.
21. US Department of State, *Brazil and Human Rights*, 1993.
22. US Department of State, *Argentina and Human Rights*, 1993.
23. Internet, Congressional Presentation, Sustainable Development Program. November 15, 1994.
24. *Crossborder Monitor*. "Argentina: Companies Must Change Their Plans Due to Green Rules." October 19, 1994.

## Emperor Penguins: Heirs To Extremes

Sanjay K. Gupta

When winter blacks out Antarctica, temperatures sink to minus 57 degrees Celsius (-70 degrees Fahrenheit), and winds scream over the ice sheets at 200 kilometers an hour (124 mph). So what are 400,000 emperor penguins doing laying eggs and raising chicks at this time of year?

Few creatures have so captured the human heart and imagination as penguins, the waddling, flightless seabirds that dwell in some of the most frigid, inhospitable and inaccessible regions on Earth. The habitat of all of the world's eighteen or so penguin species (scientists disagree over the number) ranges from Antarctica to South Africa, South America, Australia, New Zealand and even as far north as the Galapagos Islands. Yet the emperor penguin, the epitome of adaptation, rules supreme in a kingdom of ice and snow.

Emperor penguins thrive in areas where most animals would quickly perish, supremely well-adapted as they are to life in the deep freeze. The largest of all penguin species and the largest of all diving birds, the emperor is the least agile. Yet the four-feet-tall penguin can manage to leap crevasses in the ice with an incubating egg tucked safely on its feet. In water the emperor can dive as deep as 500 meters and can swim 1,450 kilometers (900 miles) on a foraging trip.

Penguins are aquatic birds, spending most of their lives at sea. Although adapted to their watery domain, penguins rely on land because they are constrained by their evolutionary past to lay eggs; and eggs cannot be laid at sea. Penguins, then, have a dual lifestyle — one that must seek a balance between the need to breed on land and the need to eat at sea, their sole source of sustenance. Breeding for an emperor penguin must of necessity consist of alternating periods of fasting and foraging.

Emperor penguins breed in the most extreme latitudes of Antarctica and have a unique seasonal cycle. Scientists have started to piece together the intriguing behavioral and physiological adaptations that enable the emperors to stay behind when all other birds depart for the winter. Courtship starts in March (fall in the Southern Hemisphere) when emperors swim back to one of about forty colonies scattered along the coast of Antarctica. The colonies stay within traveling distance (dozens of kilometers) of ice edges or polynyas, holes in the ice, where parents can go to feed. Unlike other penguins, females compete for the attention of the males. Pairs court by means of elaborate movements. Males drop their heads to their chests or lift their heads high, puffing out the muscles of their throat

regions. Females perform the same display, and both sexes scream out mating calls, the identifying signatures that allow each penguin to locate his or her mate or chick in a colony of thousands of nearly identically marked birds.

In the breeding season, female penguins slap other females with their flippers or peck at them as they want the biggest and strongest male. Some researchers speculate that this competition is due to a shortage of males. Courtship takes six weeks, during which neither males nor females eat. After mating, the male and female stand quietly beside each other until the female lays a single large white egg which weighs slightly less than a pound.

The female's partner then takes the egg onto his feet and tucks a fold of warm flesh called a "brood pouch" over it. The female leaves immediately for an extended foraging journey and for the next 65 days, until hatching, the male cares for the egg. In other words, the male goes for as many as 115 days without food. Before courtship, the male should weigh 40 kilograms (88 pounds) to have sufficient energy to fast until his mate returns. During the incubation period, one of the more astonishing social behaviors of emperors takes place: huddling. To preserve as much energy as possible, hundreds of penguins lean into a huddle, and, one at a time, eggs still on their feet, sidle inward so that hundreds of emperors continually turn. Each gets a turn at warming up in the center of the mass. If male emperor penguins did not huddle, their metabolic rate would double and they would only be able to survive two months of fasting.

Two other remarkable adaptations help the emperors through these toughest, coldest Antarctic months. One is an elaborate system of veins and arteries that serve the feet and flippers. The blood vessels weave together and wrap around each other in an ingenious heat exchange so that chilled blood returned from extremities captures heat from the blood surging away from the heart. This intricate arrangement of blood vessels minimizes energy loss. Another special adaptation is the emperor's coat. At least four layers of feathers clothe the emperor, almost like scales, overlapping lightly so they cannot be ruffled even by a 100-knot wind. These feathers are denser than those of any other bird and cover the entire body, about 70 per square inch.

The female returns from foraging just when hatching begins. After more than two month's absence, facing thousands of male penguins in the dark, she addresses her unique mating tune and locates her mate. The male by now weighs half of what he did at the beginning of courtship. Should his mate fail to return, he can feed the chick for a week or so on his own protein secretion. After that, he abandons the chick and leaves for the feeding grounds to save himself. Even mothers that do return on time, however, can lose their chicks. In a delicate, life-threatening move that lasts just seconds, the father passes the chick from his feet to his mate's. Should the chick fall during the exchange, it will freeze in two minutes.

Chick napping is a significant cause of death of emperor chicks. Single "female mavericks," as scientists call adults without offspring, wander the colonies fight-

ing for chicks. Parents are extremely motivated to brood something in their brood pouch; some even incubate a chunk of ice, pretending it is an egg. Scientists theorize that brooding ice and Chick napping come from uncontrolled hormones. However, as hormones come back to normal levels, the adoptive mothers desert the chicks they have stolen, sometimes within minutes. The abandoned youngsters will then quickly freeze to death.

For seven weeks after hatching, the parents trade off feeding responsibilities, traveling kilometers to eat squid, small fish and krill that they partially digest and later regurgitate to their chicks. When the young, shaggy, gray emperor joins a creche, the parent may spend 20 days at a time out foraging, traveling from 30 to 1,450 kilometers (20 to 900 miles) for food. When the adult returns, it must sound out its unique call to locate its chick to feed. During the five-month period after hatching, an emperor chick eats 100 kilograms (220 pounds) of food, and in a single feeding may eat one-third of its body weight.

In early December, when the chicks reach five months, the parents leave them, without instructions on swimming or foraging. During the months of December and January, the weather is most pleasant; open water is nearby and the food supply is abundant. Since it takes two months to hatch an egg and at least four months to rear a chick, the emperors must begin to breed during the middle of the Antarctic winter if young are to reach independence by December.

Emperor penguins spend their first years at sea. Not until the birds turn three to five years of age do they start breeding. Some scientists estimate that only 1 percent of adult emperors die each year, often victims of the cruel weather. No one knows for sure how long emperor penguins live, but many believe it to be 30 years or more.

Age is only one of the remaining mysteries about emperors. Questions abound, and scientists seem drawn to the birds despite the rigors of studying them. Soon after the discovery of the species almost 100 years ago, British explorers mounted a special expedition, which repeatedly risked human lives to bring back three emperor eggs to provide evidence of the evolution of feathers. That journey inspired a travel memoir called *The Worst Journey in the World*. Even the author of the book, Apsley Cherry-Garrard, wrote, "You must agree that a bird like this is an interesting beast."

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## Potok's Diograms for Society

Travis V. Beebe

Chaim Potok is an American Jewish writer, plain and simple. But the significance of his being an American writer who is Jewish is not so simple. Potok has gone through much hardship and personal struggle to become the respected novelist he is today. Impeded by the expectations of his Hasidic parents and society's preference for immediate understanding rather than detailed allegories, Potok has nonetheless made his soft voice heard in the literary world.

Chaim (Hah-yim) Potok was born February 17, 1929 in New York City (Ethridge, Kopola and Riley 348). His parents were both Hasidic, a very orthodox form of Jewish worship (Abramson Introduction). Being the son of Hasidic parents means leading a very religious life. Rabbi Yitzchok Raskin states that modern Hasidism entails being "connected to God twenty-four hours a day." In an effort "to raise this world up," Hasidics are "extra careful about everything" (Raskin). At the age of ten, Chaim Potok took an interest in art, much like his character Asher Lev in his novels *My Name is Asher Lev* and *The Gift of Asher Lev*. However, he was dissuaded from art because it was not a traditional part of Hasidism (Abramson Introduction). However, at the age of sixteen, Potok read *Brideshead Revisited* by Evelyn Waugh and decided to become a writer (Introduction). Abramson quotes Potok as saying, "the essence of the narrow social and religious world of upper-class British Catholics" in Waugh's novel influenced his decision to use religion and society as central motifs in his literature (5).

Potok graduated Summa Cum Laude from Yeshiva University at the age of twenty-one with a B.A. in English Literature. At this point, Potok left "Jewish Orthodox Fundamentalism" and entered the Jewish Theological Seminary of America where he graduated a Conservative Rabbi at the age of twenty-five (Introduction). Although Potok held no enmity towards Hasidism, he found it too restricting:

I had little quarrel with my Jewish world. I was deep inside it, with a child's slowly increasing awareness of his own culture's richness and shortcomings. But beyond the tiny Hannibal of our apartment, there was an echoing world that I longed to embrace . . . it seemed to hold out . . . the promise of worldly wisdom, of tolerance, of reward for merit and achievement, and—the most precious promise of all—the creations of the great minds of man. (1)

Leaving behind the orthodox ways of Hasidism, but still holding on to the central themes of Judaism in a more conservative way, Potok found himself in an easier position to write, but in a position that also demanded that he be careful. "He desired neither to isolate himself totally within the orthodox religious community in which he had been raised, nor to assimilate completely into what he refers to as the 'paganism' of secular American society" (1).

In an article by Richard Ostling, Jewish author Lis Harris is applauded for having been able to "[work] her way into the Hasidic community." This feat was celebrated because "Hasidim, in turn, are generally indifferent to or suspicious of outsiders" (84). The term "outsider" seems to be frequently used among Hasidim when talking about people who are not Hasidic. However, Hasidism itself is "alien and vaguely unsettling to some Gentiles and even to many modernized Jews" (84). Potok's experiences both inside and outside of Hasidism are what make him a unique author. He needn't investigate the Hasidic way of life; rather he calls upon his own experiences, thus creating a much more realistic story. "As a rabbi, as a religious scholar, as a secular intellectual in the Western tradition, as an American, as a *Zwischenmensch*, ["between person"], and as a novelist, Chaim Potok is involved in the struggle to maintain the viability of Judaism as a living civilization" (Walden 25). Further, Potok's ability to transcend the barriers of his religious life and summon feelings of reverence in all readers is what makes up for any weakness in his style. Greenfield continues:

Potok . . . is constantly stroking his slender story along with the thematic overtones of parable. And it is a parable with significance not only for divisions within world Jewry, but for men of good feelings everywhere whose chief differences involve earthly tactics—not divine ethics. (7)

By bringing his knowledge and experiences of Judaism into his writings, Potok enhances their allegorical style. Each of his novels delves into the battle between society's expectations and one's personal goals, creating examples that can be used in all conflicts. Regardless of their content within his novels, the situations Potok creates, the feelings they evoke, and the way in which they are resolved apply to any conflict one may encounter. As a result, the literary world has learned to appreciate the diagrams this Jewish storyteller has created for us.

When Potok published his first novel, *The Chosen*, it received very mixed reviews. Philip Toynbee, perhaps one of his harshest critics, said that Potok's first novel had a good message but "he writes rather feebly for too much of the time, using too many exhausted phrases and dead words" (21-2). However, Toynbee is quick to add that very few Jewish authors "have been able to write about their emergence with such an unforced sympathy for both sides and every participant" (21-2). Although writing in too much detail has been one of Potok's biggest criticisms, it has also been what critics have extolled him for. In another review of

*The Chosen*, Josh Greenfield writes:

Happily, Chaim Potok has the ability to render the parochial as pure blessing, the mark of a true novelist: his details are hairline in quaint precision, but they reverberate with universal implications; his characters are special in make-up, but what really distinguishes them is inner illumination, not pancake. Though far from polished in every sense, he is nevertheless already a master in the art of allegorical specific, and his remarkable book will give universality to a tiny section of Williamsburg in Brooklyn as Joyce gave an eternity of urbane meaning to one day in hick Dublin's fair city. (7)

Greenfield's commentary epitomizes the essence of Potok's style. While many times his writing will seem monotonous and predictable, a second look will reveal his strategy. Whether Potok is describing in detail the way Asher Lev is painting, or the way Reuven Malter is studying Talmud, an underlying metaphor is always being created. With Asher, the colors being described often echo the mood and tone of the events the specific passage is following or introducing. The intricacies of the Talmud readings Reuven is studying parallel the perplexity of the circumstances in his life (Potok). In using so much detail, Potok in effect captures the reader, pulling him into the story, inviting him to be the main character.

The substantiality of Chaim Potok as an American Jewish Author may have been in doubt after *The Chosen*, but his emergence as an author of literary merit was without question after his 1972 publication of *My Name Is Asher Lev*. In this novel, which Edward Abramson considers to be the most autobiographical of all of Potok's novels, "Potok (takes) a step forward in the subtlety and nuance of his writing, having eliminated many of the flaws of his previous works" (72). The clarity of Asher's dilemma is fatally clear; the denouement, however, is not. In this novel, Potok creates a parable so intricate that failing to fulfill its full potential would be incredibly easy. Yet Potok does not disappoint in his execution. The "universal implications" Greenfield discusses are omnipresent in *My Name Is Asher Lev*. "The content of Asher's narrative is similar: it is about how the past reaches into the present until it becomes the present" (Abramson 72). This commentary has nothing to do with Hasidism, Judaism, or any form of religion. The messages received from Potok's works are far above any human characteristic. Chaim Potok is quite simply a genius when it comes to characterizing the human psyche. His ability to capture in writing the very essence of what cannot be described is what makes him an incredible storyteller and author.

Considering what Chaim Potok has had to overcome to become such a popular author, it has been quite an accomplishment. However, when the level at which he writes is also considered in addition to what he has overcome, it becomes evident that Potok is far better than the average American author. The ability not

only to entertain one's readers, but to teach them something they didn't know, and to evoke feelings in them that they weren't sure they had, is what every author strives to do. The seemingly simple story-lines Potok creates end up swallowing readers until they are left touched, moved, and somehow better off than they were before they picked up his book. "The names, the Hasidic communities, the Brooklyn locales and the local color may change from novel to novel, but Potok's identifying stamp remains as consistent as it is predictable: 'sensitive protagonists caught between rival authoritarian figures (representing) . . . Jewish Traditions'" (Walden 40). "Basic to every Potok novel are two questions: 1) How to live as an observant Jew in a secular society, and 2) To what degree can one hold to the tradition of orthodox separateness in a secular society?" (23). These questions provide a consistent set of motifs for every story.

Although the underlying motifs remain the same, the lessons learned from each novel are as unique and individual as the characters portrayed in their respective stories. Reuven Malter learns not to judge people based on their appearance or ethnicity, but rather the content of their souls. His opinion of Reb Saunders's use of "silence" to raise Danny changes dramatically when he fully understands it, though he still does not agree with it. Asher Lev learns that in choosing to practice actively and display his art, he has also chosen to leave his family and religion behind. By displaying his portraits of the "Brooklyn Crucifixions," Asher chooses to follow his passion and expectations of himself rather than the expectations of those around him. Potok's ability to create an allegory for all conflicts by describing the lives of a few isolated people in a remote Jewish sect is extraordinary. His unique style, although sometimes referred to as rough, is unparalleled in content. The intimacy of his characters is as unmistakable as the earlocks he describes them as having. Each detail provides yet another part of the intricate puzzle he puts together before his readers' eyes. In Edward Abramson's book *Chaim Potok*, Abramson quotes Potok in what must surely silence any and all of his critics:

Critics of high culture have trouble pigeon-holing my work. One reason is because my books are not in keeping with their central tenets of novel-making, which require an anti-hero, a comic vision, a measure of kinky sex and a good-versus-evil tension. The critics don't know what to make of the world I'm creating . . . My world is about good people involved in situations that they somehow want to come to terms with in a positive way. (80-1)

This quote epitomizes the essence of the American author who happens to be Jewish. It shouts out at people as though spoken by an outsider. Yet deep inside each of us, we know that he is right. And every time he speaks of how a young boy grows up in a small Jewish sect deep in the heart of Brooklyn, we recognize how we grew out of our childhood deep in the heart of our home. Every time he

describes how a Reuven Malter overcame his hatred for the Hasidim because they were so orthodox, we see how we too have hated people for their differences. Every time he describes how hard it was for a Danny Saunders to break the legacy of his family because his heart was in a different calling, we also realize how we do things many times just to keep with tradition, and how hard it would be for us to ignore the expectations placed on us. And every time he tells of how a young boy with an unacceptable gift obeys his passion rather than his orders, we too wish for the spirit to do what we have to do in order to be happy, regardless of the outcome. We read his books not only because he invites us to become his character, but because they teach us about ourselves, and somehow give us a sense of closure in this unending adventure called life.

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## The Place and Politics of Urban Aboriginal Art

Elizabeth Nordt

Aboriginal art today is almost always layered with not only artistic and technical expertise but the political and social ramifications that make it Australia's most exciting and important culture industry.<sup>1</sup>

Urban Aboriginal art most specifically exemplifies this layering of artistic and technical talent and societal issues. Urban Aboriginal artists face unique challenges and are able to achieve stronger reactions to the intellectual content of their pieces than traditional Aboriginal artists. This paper developed from the time the author spent studying in Australia, in which she investigated the link between Aboriginal art and the culture from which it derives and the interaction of that culture with White Australia. This paper will examine the position and problems of urban Aboriginal artists and the political content of their work.

The Aborigines are the native people of Australia who came to the continent 40,000 years ago. Like most indigenous groups, they developed a diverse and rich culture closely linked to the land on which they lived. As time passed, they spread across many different geographic regions, and each group adapted their culture to fit the environment in which they lived. The invasion of white Europeans to the continent, resulted in the death of many individuals and some entire cultures. A limited number of those who lived in remote areas were able to continue their traditions, but most were either killed or forced into the cities. This last group are now known as urban Aborigines and have recently begun the painstaking process of discovering their roots.

Urban Aboriginal artists have only recently begun to gain the recognition they deserve from galleries and curators. There have been two main waves of urban Aboriginal artists. The first group produced major works in the 1970's and included Lin Onus, Trevor Nickolls, Gordon Syron, and Raymond Meeks. The second wave started in the early 1980's involving many artists such as Gordon Bennett, Fiona Foley, Ellen Jose, Karen Casey, Tracey Moffatt, Robert Campbell Jnr., Ian Abdulla, and Sally Morgan. The *Koori Art '84* exhibition at Artspace in Sydney was considered groundbreaking in getting urban Aboriginal artists' work into galleries, generally a prerequisite for public recognition of their work.

Initially, one major problem in receiving recognition is the difficulty of categorizing Aboriginal artists. Being labeled as Aboriginal seems to take urban artists out of all other spheres, such as contemporary Australian art. Yet their work lacks

the typical characteristics seen as needed to make it authentic Aboriginal art. Differentiating between traditional and urban Aboriginal artists is still a major problem today. The differences are stated simply as geographical, but this denies movement between the groups. Traditional Aboriginal art is based on long standing cultural and religious beliefs and their relation to the land. Urban Aborigines have been ripped away from their traditional culture and forced to forge a new life in the cities built by white settlers. Reclaiming their Aboriginality has been an arduous and complex process which their painting reflects.

Until recently, the stigma which was attached to being Aboriginal prevented some urban young people from learning about their heritage. Parents and other well-meaning adults concealed children's Aboriginal identity in order to protect them from the prejudice they would inevitably encounter. The truth was often revealed or discovered during adolescence, causing great upheaval and confusion. Determining the meaning of Aboriginality and finding a place between the familiar white world they were raised in and the little known and often misunderstood world of traditional Aborigines became a quest for many. This was true of artists including Gordon Bennett and Sally Morgan.<sup>2</sup> Reconnecting with their Aboriginal heritage can be seen as a theme in most urban Aboriginal artists' work.

Another geographical category for Aboriginal artists which is often ignored, are rural Aboriginal artists, who generally are only considered a sub-group of either urban, or, less often, traditional artists. Rural artists do emerge from different circumstances which are reflected in their work. Such artists as Robert Cambell Jnr. and Ian Abdulla both have distinctive styles that resonate from their rural upbringing. Their art often shares similar political themes with urban artists. Rural Aborigines also face problems of loss of cultural heritage, although not always as severe as those raised in an urban environment. Both groups share the search for identity.

One major problem associated with this search is that of authenticity and appropriation. Urban Aboriginal artists have been accused of appropriating traditional Aboriginal styles and symbols. Some have gone as far as to state "urban artists are little better than cultural pirates".<sup>3</sup> Since they lack the cultural heritage which would make them the legitimate custodians of techniques used to portray traditional dreamings, they are left with little to connect their art to that of their ancestors. Many urban artists have attempted to alleviate this problem by making pilgrimages to traditional communities in remote areas, particularly in the Northern Territory. This allows an exchange between urban and traditional Aboriginal artists which is beneficial to both. Dispossessed Aboriginal artists gain an understanding of their Aboriginality while traditional artists learn about current issues dealt with by urban Aborigines, among other things. Lin Onus has greatly benefited from such journeys. He now travels from Melbourne to Maningrida, N.T. each year to visit his adopted family at Garmedi Out station. He considers artists Jack Wunuwun and John Bulun-Bulun to be two of his fathers.

Lin Onus often creates layered images with a suggestion of photorealism. His themes often involve his journeys to the N.T. to connect with his heritage. This is seen through the recurrence of the motor vehicle in works such as *Tracks and Mum, When Do We Get There- Road to Yuendumu* (1987). Images of the home he has found by traveling are constructed in layered compositions, sometimes resembling photographs. This is the case in *Jilaminy's Billabong*, and *Arafura Swaup*. The layers are used, perhaps, to show how the Aboriginal heritage represented is buried to Urban Aborigines.

A common thread uniting Aboriginal Artists in all categories is the theme of the land. Whether it is a traditional dreaming, a European style landscape, or a political statement about land rights, Aboriginal artists are drawn towards the land and seek to express their relationship with it. Some urban artists create landscapes in addition to their regular works while others incorporate the land into everything they do. Trevor Nickolls, well known for his highly political paintings, also paints beautiful landscapes. "I find it necessary to do the landscape, I think it's good for my health to do them because they are nice, quiet, meditative, paintings. Then there are the more political ones, like *Machine Time*—exorcising these things and expressing the way I feel about these things."<sup>4</sup>

Many urban Aboriginal artists have been formally trained in the European art tradition, some through regular art schools and others through prison art programs while incarcerated. This training has lead to a tremendous mixture of styles. Galleries face categorization problems, as discussed earlier, because their art is not "authentic Aboriginal" yet it is also not "fully" contemporary Australian. Artists often incorporate both styles. Some artists, such as Lin Onus and Trevor Nickolls, attempt to unite the two, making their art accessible to a wide range of viewers. Nickolls is credited as being the first to merge the two styles, a trend still followed by several artists including Onus. "Onus purposely builds into each work enough cultural imagery from both Aboriginal and white Australian visual systems, the humor and drama, to access audiences from both camps."<sup>5</sup> Some later artists have taken a more direct confrontational approach. This is clearly seen in the work of Gordon Bennett. Bennett uses his Western art training to challenge his viewers perceptions of such complex issues as aesthetics, history, and morality.

Uncovering his Aboriginality and presenting Aboriginal history to the world have been the key issues in Gordon Bennett's work. Bennett, who discovered his Aboriginality at the age of 11, did not turn to art until after he had worked for Telecom for many years. Formally trained in the European tradition of painting, Bennett's work is a post-modern combination of styles. He considers his work to be history painting, or a reworking of the artificially constructed history of colonization proposed by the white world. His work is directly confrontational, challenging his viewers to cope with their own guilt at the treatment of Aborigines by whites that has continued from the first invasion until today.

He undertakes his deconstruction of white history by using European traditional symbols and setting them within a new context that either opposes their original meaning or sheds new meaning on them. This is seen in his continued use of the letters A,B,C, and in his most recent work with black and white angels and crosses. Bennett also employs Western perspective lines. By blatantly drawing perspective diagrams into his work he draws attention to the convention of European use of perspective to create a false sense of reality as packaged neatly for the viewer.

The meeting of two cultures is powerfully portrayed in *Painting for a New Republic (the Inland Sea)*, shown in Bennett's recent exhibition at the Sutton Gallery. This work shows the Western desert (or inland sea) before invasion as brown and blue circular pattern on the right, with the British flag in the upper left hand corner and a boat coming from it with two white men bailing blood. In the center is a large Aboriginal head colored red with blood. At the top in the center is a book labeled 'Kant.' Kant was a 19th century German philosopher known for his ethical theories. Kant's ethics would totally oppose the morality of the events depicted. Adding his book to the painting mocks the morality of the invaders and illustrates the hypocrisy of white ethics. The painting exemplifies the highly analytic nature of Bennett's work.

Urban Aboriginal art is known for its political nature. The art often depicts the struggle for survival of Aborigines faced by a brutal colonizing force as well as the celebration of that survival. Issues represented span from the first arrival of Whites through to current problems. "Melbourne painters Lin Onus and Les Griggs and Adelaide artist Mitch Dunnett paint about the searing edges of relationships between the races: also using amalgamations of widely dispersed Aboriginal imagery, they depict the commodification of Aboriginal culture, the devastating effects of alcohol and drugs, and the national tragedy of the mounting toll of black deaths in custody."<sup>6</sup>

These subjects are dealt with by other artists as well. Further political issues such as the so-called Aboriginal "welfare system", the abduction of half-caste children, and apartheid restrictions are referred to in urban Aboriginal artists' work.

Each artist uses a unique, personal style to approach and portray such issues. Although Bennett's work derives from his personal experience in coming to terms with his Aboriginality after being indoctrinated by white history and value systems, his approach is impersonal and intellectual. Other artists find better expression through the personal side of painting. Sally Morgan is a good example of this. Her work is vastly different from Bennett's. She primarily does screen prints and enjoys the use of bright colors. Her work is generally more optimistic, but she too tackles difficult political issues. She does many environmental works, dealing with the land. *Hearts and Minds* shows a recurring figure with trees for hair and small landscape scene in the head and chest. This indicates the ties that

she and her people feel towards the land. Her more political works deal with social justice issues, many involving women's issues not adequately represented in male artists' work. *Taken Away*, 1987 makes a powerful statement about the removal of Aboriginal children from their families, and thus the breakdown of Aboriginal families and culture.

Regardless of the differences in style and the many common themes represented, the politics of urban artists seem to be an attempt to come to terms with the history which society is continually trying to forget in order to negotiate a better future. The problems of categorization and appropriation have no easy answers, but must continue to be wrestled with. Urban Aboriginal art plays an important role in the relations between Aborigines and white Australians and can be a tremendous help in coming to terms with the history of colonization.

### Endnotes

1. Eather, M., "Lin Onus-Cultural mechanic," *Artlink*, March 1990, p. 80.
2. See Sally Morgan's autobiography, *My Place*.
3. Onus, Lin, "Language and Lasers," *Art Monthly*, no. 3, May 1990, p. 15.
4. As quoted in Crawford, Ashley, "From Dreamtime to Machinetime-Trevor Nickolls," *Tension* 17, August 1989, p. 51.
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6. Smith, Terry, "From the Desert: Aboriginal Painting 1970-1990," in *Australian Painting 1788-1990*, by Bernard Smith with Terry Smith, Oxford University Press, Melbourne, 1991, p. 514.

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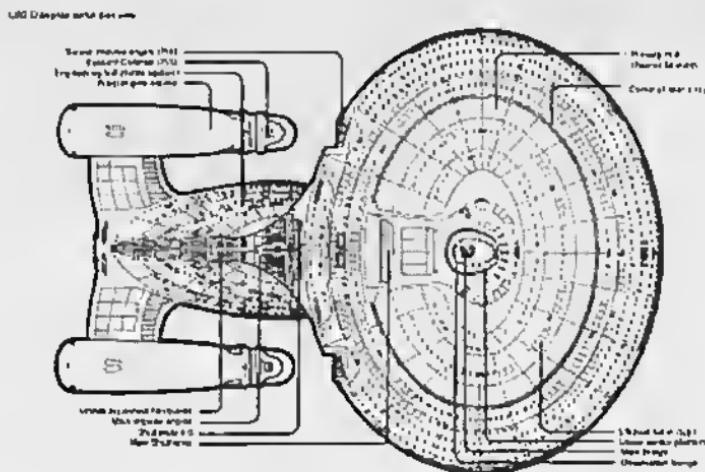
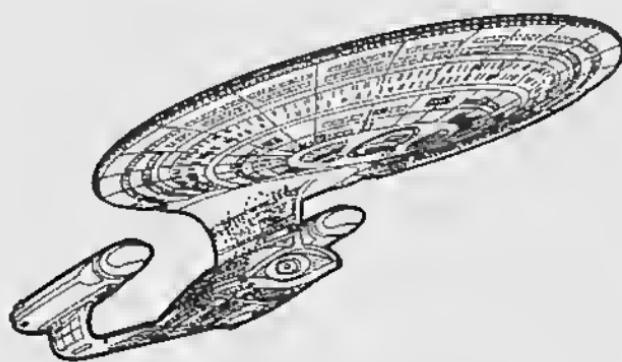
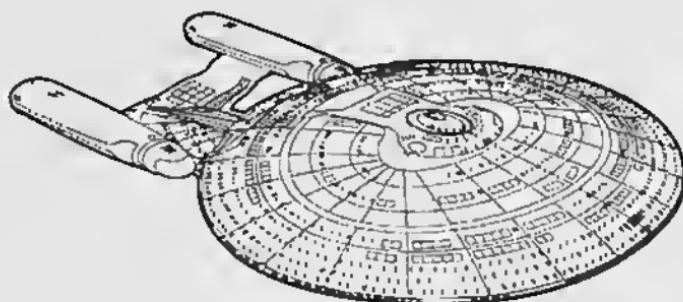
## The Theoretical Basis of Star Trek

Jerome Justus Lapham

For more than twenty-five years, the television show *Star Trek* has captivated millions through its innovative stories, interesting characters, and, as will be the focus of this paper, its technology. Perhaps the one thing that separates *Star Trek* from other science fiction is the extent to which its fictional technological basis is shown. While most science fiction uses a technology with a poor scientific basis (or no scientific basis), *Star Trek* actually tries to give its technology some scientific substance. Given that most of the technology is far beyond anything that the human race could presently achieve, it is still remarkable how the *Star Trek* writers attempt to explain, based on today's concepts, their marvelous fictional machines. This paper will attempt to show the reasoning behind the technology, and perhaps more importantly, the gaps and inconsistencies, based on current physics and quantum mechanics.

In the twenty-fourth century, Starfleet's ultimate technological achievement is their flagship, the *U.S.S. Enterprise* NCC 1701-D. The *Enterprise*, being a Galaxy Class Starship, is the largest, most powerful of its kind. With its mission of exploration and scientific discovery, it must naturally have the means to travel the vast spaces within our galaxy. In order to make this in any way possible, the *Enterprise* must have the ability to travel faster than the ultimate speed — the speed of light. Even if it traveled at the speed of light, the nearest star system is a good four light years away. Only one problem exists with this kind of travel. This problem is called "special relativity." Special relativity holds that as a mass approaches the speed of light its mass increases. This is given by the equation,  $m = \frac{m_0}{\sqrt{1 - \frac{v^2}{c^2}}}$ , with given  $m$  = mass,  $m_0$  = rest mass,  $v$  = velocity, and  $c$  = the speed of light. As an object of any rest mass approaches the speed of light, the fraction  $\frac{v^2}{c^2}$  approaches one, thus leaving a zero in the denominator. As  $\frac{v^2}{c^2}$  approaches zero, the mass approaches infinity. (It is important to note that division by zero is not possible; the fraction is not divided by zero but a number that asymptotically approaches zero.) There also remains the problem of "time dilation," or the apparent slowing of time to an observer who is traveling at "relativistic speeds" (those close to the speed of light). The equation given that  $T_t = \frac{T_s}{\sqrt{1 - \frac{v^2}{c^2}}}$  is the time as observed by a stationary observer (relative to the moving observer),  $T_s$  = the time aboard the space-ship, and, as before  $v$  = velocity and  $c$  = the speed of light, shows that, as a space ship approaches the velocity of light,  $v$  approaches  $c$  and the denominator

Diagram 1, The USS Enterprise NCC 1701-D



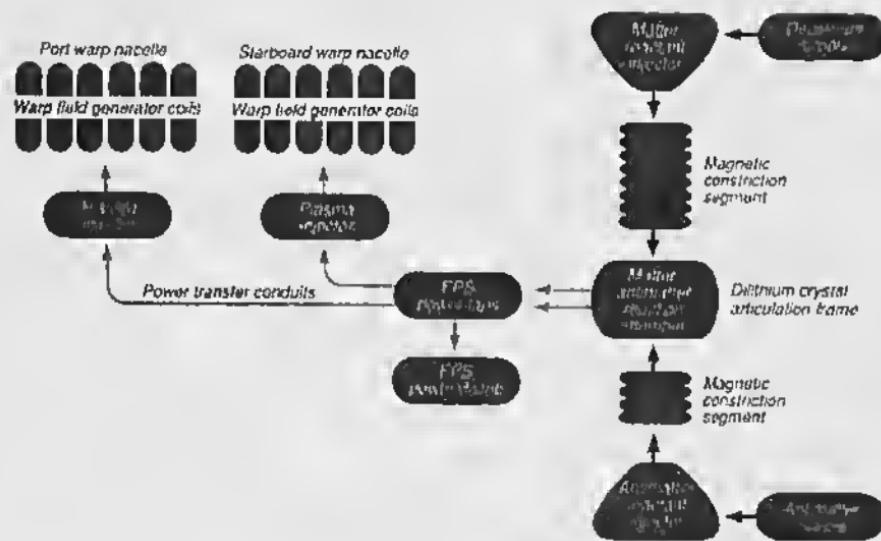
becomes smaller and smaller until  $v = c$ , and, as with the mass equation, a singularity is formed, effectively slowing the time on board the star ship to a stop (at lightspeed).

In order for the *Enterprise* to go gallivanting across the galaxy, the designers must find a way around this problem of relativity. This problem is solved by the new "warp physics" that is the concept behind the enormous power of the engines on the *Enterprise*. Whenever the *Enterprise* travels faster than light speed, it is said to go into "warp." The warp engines that drive the ship throw what the designers of *Star Trek* call a "sub-space" field around the ship. A sub-space field is basically a controlled, focused, local distortion of space-time. When this sub-space field is generated by the nacelles of the star ship, it effectively lowers the mass of the entire star ship, thus greatly reducing the problem of "mass dilation" by manipulating the curvature of space-time itself. The ship is actually propelled, not by any exhaust or propulsion method, but rather by the sub-space fields themselves. The fields wrap around and "squeeze" the ship through space. In effect, the ship isn't moving, but the space around it is "pushing" it forward, in much the same way a wet bar of soap is propelled when one squeezes it too tightly. The shape of the sub-space field, and the rate at which it "pulses," thus pushing it along, determines the direction of the ship and how fast it moves, respectively.

So, why doesn't the ship feel any of the effects of time dilation? In order to work around this problem, the ship is said to never actually hit the speed of light. The sub-space fields around the ship are not actually continuously present. The fields switch on and off, pushing and pulling the ship respectively, every  $10^{-43}$  seconds (Planck time). Since nothing can be effected in the length of Planck Time, the shortest unit of time measurement, the ship is being pushed over the speed of light and moving at zero velocity alternately every  $10^{-43}$  seconds. The result is that neither of the velocities is attained, but the net velocity is over that of the speed of light. Since the ship never *actually attains* the speed of light, but rather goes on either side of it for short (REALLY short) periods of time, the problem of time dilation is minimal. It does still exist, though, because whenever the ship drops out of "warp," the chronometers on the ship automatically look for the nearest time/navigational beacon and reset themselves. This only has a major effect when the ship has been traveling at high warp velocities for long periods of time. It is a problem when the ship uses its sub-light, or "impulse" engines (fusion exhaust propulsion). The Star Fleet regulations state that a ship should not travel more than  $.25c$  for any extended period of time because of the resulting time dilation problems.

In order to warp space-time in such a way as the warp engines do, it would be expected that an enormous power supply would be necessary to accomplish this. The *Enterprise* naturally possesses such a power supply. The main generator for the entire ship is the matter/antimatter reaction unit (Fig. 1). The generator comprises the matter/antimatter reaction chamber, the matter/antimatter injectors,

## Warp Systems (Fig. 1)



and the supply tanks of deuterium and anti-deuterium. The tanks of deuterium and anti-deuterium are where everything starts. The deuterium tank stores the heavy hydrogen in a slush form, which is heated up to a liquid state and piped down through a Magnetic Constriction Segment to the reaction chamber. The anti-deuterium tank is a little different in design than the deuterium tank. Since antimatter will react with any normal matter it touches, it must be suspended in a huge magnetic field. The anti-deuterium is also kept in a slush form, heated to a liquid when needed, and then transferred through the magnetic constriction segment (which pressurizes, focuses and aims the stream), to the main reaction chamber where it combines with the deuterium. Something in the main reaction chamber focuses the energy created by the violent interaction between the matter and antimatter. To fulfill this function *Star Trek* designers came up with the wonder-crystal called Dilithium. Dilithium is supposedly the only substance that, when exposed to a powerful electromagnetic field, becomes a porous, charged substance through which the antimatter can pass without interacting. The antimatter passes through the crystal, and reacts with the matter on the surface of the crystal. The resulting energetic plasma that forms is reflected off of the shaped Dilithium Crystal and directed through magnetic conduits to the Electro Plasma System, which harnesses the plasma energy in some un-stated fashion (Fig. 2).

This energy is primarily used by the warp coils, which warp the space around the ship, propelling it forward, and the weapons systems, which require great amounts of energy, as well as some relatively minor secondary systems. The warp

engines naturally require more and more energy the higher the "warp" speed. Figure 3 shows the energy consumption in relation to the speed of the starship.

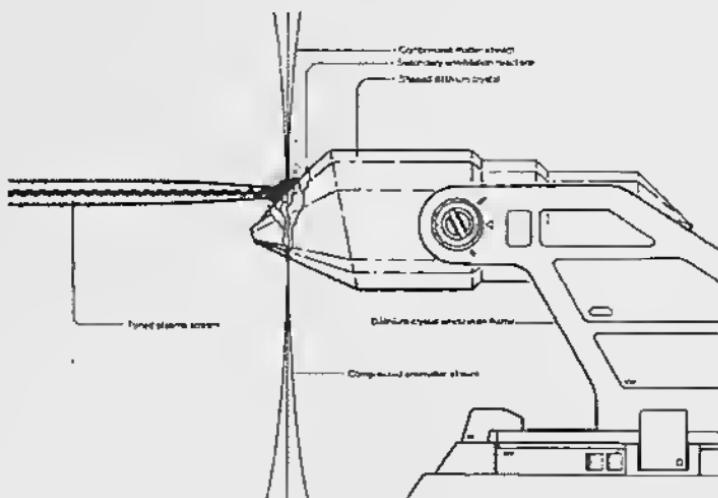
The spikes in the graph show the energy consumption as each warp factor is crossed, much like some chemical reactions need activation energy to start. While the spikes lower as speed increases, the overall energy increases until the energy consumption geometrically goes to infinity at warp 10, thus preventing the *Enterprise* from going too fast and exploring the galaxy at a rate that would make the show unprofitable ("Beyond a certain speed, we found that the ship would be able to cross the entire galaxy within a matter of just a few months. Having the ship [go] too fast would make the galaxy too small a place for the *Star Trek* format." [From the technical advisors of *Star Trek*]).

Another means of transportation in the *Star Trek* world are the "transporters." It appears that, in the Twenty-fourth century humanity has finally found a way to convert matter to energy and energy to matter thus proving Einstein correct. The transporters work on the basic principle of converting matter (say, a human being) into energy, "beaming" that energy to a specific location and having that energy reform into matter. Several problems might arise with such a procedure. First, in order to transport a living creature, everything in the subject would have to be broken down, all the way to the quantum level. When going down to the quantum level, the Heisenberg uncertainty principle comes into play, stating that the more you know about a particle's velocity, the less you know about its momentum, and vice-versa. In order to transport a living being into energy and back to matter again, one would have to know both the location and momentum of all of the particles contained within that living being. The transporters achieve this by using what is called a "Heisenberg compensator." When the technical advisors of *Star Trek* were asked how this miraculous device works, they replied, "Very well, thank you."

When the transporter sequence is begun, the subject is dematerialized and converted into an energy stream. The quantum resolution pattern is then stored in a "pattern buffer" so that the subject will rematerialize, not in some random fashion, but in the same form as when the transporter sequence was begun. Apparently, some incredibly dense form of computer memory has been invented that can hold the position and momentum of *every single quantum particle* in a living being. Also, one must realize the incredible amount of energy trapped in the matter of something even close to the size of the human body. It was estimated that, in the explosion of the atom bomb in Hiroshima, the amount of Uranium-235 in the bomb that was turned into energy was about equivalent to the mass of a dime. Consider then, the amount of energy in a human body. Something in the transporter must contain this energy when it is beamed through space so it doesn't scatter everywhere (as thermodynamics would dictate). To solve this problem, the energy beam is "encased" in what is called the "Annular Containment Beam."

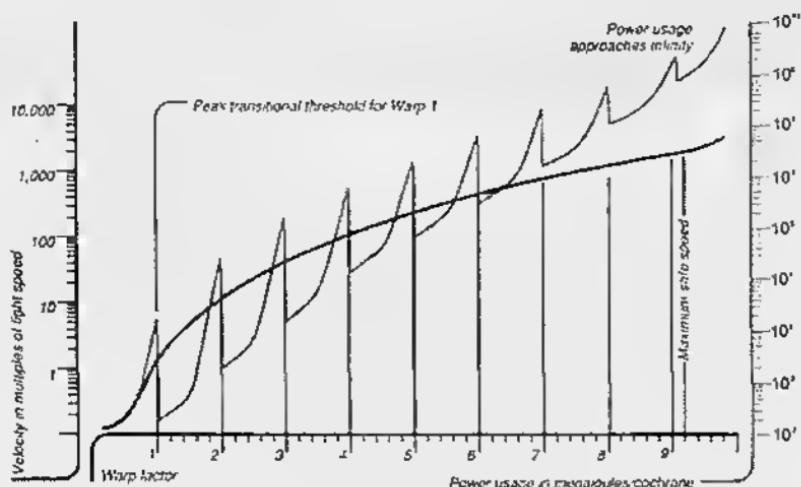
The Annular Containment Beam brings in the idea of "force fields" or "deflec-

## Dilithium Crystal Setup (Fig. 2)



## Warp Speed/Energy Consumption Graph (Fig. 3)

### 5.1.1 Warp speed power graph



tor fields." The force field operates by creating, once again, a local, focused, spatial distortion. The Annular Containment Beam is much like a tube—made up of a local spatial distortion. This distortion prevents the energy stream from scattering, and also increases the range of the transporter, depending on how much energy is put into the Annular Containment Beam (the more energy, the farther the range). There is also another problem—if one were to simply beam down to a planet from a starship orbiting the planet, one would materialize on the surface of the planet moving at the same speed as the starship. This would make for some badly skinned knees. In order to correct for this effect, there exists within the transporter system (within the pattern buffer, specifically) a device that allows for "Doppler compensation." The computer that controls the transporter uses the Doppler shift to determine the appropriate vectors for beaming so that the subject may materialize stationary relative to an object moving at any speed, whether it be a passing ship, or an orbiting planet.

It would seem that, in the Twenty-fourth century, a satisfactory and workable theory of quantum gravity has been established. A few components of the *Enterprise* use this concept. Perhaps the most obvious is the artificial gravity generators aboard the ship. These generators produce a very short lived and therefore very local (about 30 meters) graviton field. Another system that uses the concept of gravitons is what is known as the "tractor beam." When traveling on exploratory missions, it may be necessary at times to tow or push fairly large objects that are in close proximity to the ship. The tractor beam utilizes a graviton emitter (this graviton emitter generates a beam rather than the field such as used for the artificial gravity generators) in conjunction with a subspace beam emitter. Somehow, although all sources fail to explain how, the interference between the graviton and subspace beams produce a large spatial stress on their focal point (i.e. the target of the beam). Depending upon the energy and interference pattern of the graviton and subspace beams, the object can either be repelled or attracted.

The defensive "deflectors," sometimes simply called "shields" also utilize subspace and graviton fields. The shields are a sandwich of subspace field, graviton field, and subspace field. The effect of the spatial distortion from the subspace field makes it difficult for anything to pass "through" the field (after all, space is being curved away from the ship). Should an object make it through the subspace fields, the graviton field will then try and repulse the object. Failing that, the other subspace field, again, acts as a kind of solid to which the object has difficulty passing through. Failing that, the object simply passes through the shield and damages the ship. Other uses are made of this type of shield besides the purely defensive. When a ship such as the *Enterprise* is traveling at FTL velocities, sometimes many thousands of times faster than the speed of light, even microscopic particles can cause great damage to the ship. As a result, the ship possesses what is known as the "Navigational Deflector." This large dish underneath the saucer section of the ship projects five layered, parabolic subspace fields out in front of

ship at a distance of about two kilometers. These fields deflect any microscopic matter, such as stray hydrogen and other particulates, that can cause friction and damage at high velocities. A larger deflector beam is projected out thousands of kilometers ahead of the ship. This larger deflector beam works in conjunction with the sensors to detect and push away any large matter in the ship's path that may be hazardous. A large scanning distance is required for such high velocities.

The offensive weaponry of the Twenty-fourth century utilizes (perhaps unfortunately) the most advanced parts of science. The two main weapons found aboard the *Enterprise* are the photon torpedoes and the phasers. The photon torpedoes work on the basic concept of matter/antimatter annihilation. Within the torpedo are thousands of "packets" of matter and antimatter, suspended in a magnetic field so as to prevent premature reaction (thus destroying anything around it). When the appropriate time is reached the detonation circuitry releases the magnetic suspension fields for the matter and antimatter. The reaction is briefly contained in the shielding magnetic field around the torpedo, thus building the pressure of the reaction until the field gives out and the torpedo explodes, releasing all the energy in the reaction. In today's time, anti-deuterium is attempting to be created. It is estimated that, were anti-deuterium used for fuel in a rocket, for instance, one one-hundredth of a gram of anti-deuterium reacted with an equal part of deuterium would be the explosive equivalent of 120 tons of liquid hydrogen and liquid oxygen reacting together. One photon torpedo, which contains about 1.5 kilograms, is 15,000 times more powerful than a reaction of 120 tons of liquid hydrogen and liquid oxygen. Phasers are not projectiles, as the photon torpedoes are, but rather energy discharge weapons. Phasers are based on what is called the "rapid nadion effect." The stored energy enters the phase system and is released in the form of nadions. Nadions are defined as short lived subatomic particles that posses special properties related to the high-speed interactions within atomic nuclei. In other words, the energy released from the phaser emitters rearrange, in a destructive way, the nuclear structure of the target.

From the direct manipulation of the curvature of space-time, to the production of stable antimatter, to a workable theory of quantum gravity, to the direct conversion of matter to energy, it would seem that much progress has been made by the Twenty-fourth century. While all of this may seem very far-fetched, some of it is a little closer to becoming reality than one might expect. There was recently an article in the *New York Times* about the production of stable anti-deuterium and the suggestion to use it as rocket fuel. Perhaps some of these scientific marvels are at least within the realm of possibility.

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## Modern Mind in an Alien World

Misty Rose Saracino

Gender shapes the individual in modern Western society like no other cultural construction does. From birth we are taught and cared for according to whether we are male or female. In Ursula Le Guin's novel, *Left Hand of Darkness* (Ace Books, 1969), gender is not a primary factor in how the Gethenians treat each other or how they are supposed to act. Gender is not an issue at all in their world. By introducing a gender-neutral world, the novel questions the nature of gender in our society and its importance in defining the individual.

Genly Ai is the human we can most identify with in Ursula Le Guin's novel. He is from Ekumen/Earth, born and reared amidst gender stereotypes. Genly Ai was sent to the nation Karhide on the planet of Gethen/Winter to attempt to establish a peaceful alliance between Ekumen and Karhide (as well as other nations on Gethen). Forming an alliance, however, is not the toughest obstacle for Genly Ai. First, he must learn to trust the Gethenians in their alien, androgynous form. The progressive course of Genly Ai's relationship with Estraven, a Karhidian traitor, parallels Genly's acceptance of the Gethenians and their gender-free world.

Genly Ai arrives in the Gethenian world already knowing what the inhabitants are like. He was forewarned by the previous party sent to Karhide that the Gethenians are very different from humans, being gender potentials and possessing both female and male characteristics. Yet, when he meets them, he does not know what to think of these people. Because he is unwilling to let go of his human preconceived notions of men and women, he constantly compares every Gethenian to one or the other. When Genly meets Estraven, he describes him as "stocky" and "dark"—characteristics that could fit man or woman. Genly Ai knows of the Gethenians' nature, but is still confused by its ambiguity.

Genly Ai claims, "I don't trust Estraven, whose motives are forever obscure" (7). Genly ties Estraven's entire being into his absence of gender. His mistrust of him, as well as all other Gethenians, lies in the fact that his actions do not follow any gendered pattern. Every time Genly sees a Gethenian, he attempts to view them as feminine or masculine in hopes that they will also comply with the appropriate stereotype.

Genly Ai already knew the way of the Gethenians before he set foot on their world, but was not prepared to deal with these genderless people. Intellectually, he knew who they were and how they behaved, but still could not separate himself from his deeply entrenched gender perspective. Genly does not know what

to expect from the Gethenians. He does not heed the advice of the first Ekumenical party who arrived in Gethen before him:

The First Mobile, if one is sent, must be warned that unless he is very self-assured, or senile, his pride will suffer. A man wants his virility regarded, a woman wants her femininity appreciated....On Winter they will not exist. One is respected and judged only as a human being...(95)

The Ekumenical party agrees with Genly that interacting with this world is an "appalling experience." The Ekumens cannot imagine a world without gender and cannot cope with it when they finally see it.

Since the Gethenians are both men and women, Genly does not initially see them as humans, or, at least, not human in the way that he is accustomed to. While describing the Gethenians' inability to go to war, Genly comments on their androgyny, "They lacked, it seemed, the capacity to mobilize. They behaved like men, or ants" (49). Genly perceives all their inadequacies to be the result of their genderlessness. He feels he has no one to turn to, no one to trust.

If anyone from our modern, Western society were to go to Gethen, I believe he or she would harbor the same fears and doubts because of our inability to abolish gender stereotypes. When Genly is describing women to Estraven, he draws a parallel to our society, "I suppose the most important thing, the heaviest single factor in one's life, is whether one's born male or female. In most societies, it determines one's expectations, activities, outlook, ethics, manners—almost everything" (234). We were instructed since birth to distinctly separate man from woman and categorize everyone as one or the other.

In almost all of our psychological theories of development, establishing a gender identity is a key stage of growth. From day one we are reared as either girls or boys. As children, we either wore pink or blue and played with toys specific to our gender. In most cases, there is little room for gender-switching. As we get older, if we don't act as our gender prescribes, then we are considered inferior or strange. The stereotypes follow us everywhere and we are labeled according to them—boy, girl, tomboy, sissy, etc.

Not only are our actions preplanned, but our characteristics are gender-labeled as well. Women are supposed to be soft, compassionate, and emotional. Men are supposed to be strong, practical, and providing. As far as internal characteristics go, it also has negative connotations to behave as the opposite gender does. An emotional, soft male or a strong, masculine female would almost be considered as alien as a gender-neutral Gethenian.

We share Genly Ai's fear of the unknown. We have a need to label and categorize everything. And if no categories exist, we either will create one or label it as "freakish" or odd. Genly has never seen anything like the Gethenians in the Ekumen/Earth. He can not categorize them, and, thus, feels he can not trust them.

His view is that if he does not know what they are, how is he supposed to understand their motives or know what they are going to do.

From the gender-neutral point of view, Estraven's first impression of Genly Ai is the same as the other Gethenians'. He sees Genly as an "alien" and "pervert" because of his continuous state of kemmer. Kemmer is a short period of time in the reproductive cycle that it is appropriate and necessary for people to be male or female; however, Genly's permanent maleness is foreign to Estraven. But after his initial shock, Estraven does not hold any prejudices against Genly because of his gender. Estraven was the only one who did not question Genly's motives or how other gendered people act and can be trusted. Estraven was a traitor to Karhide, but stayed true to Genly Ai. Genly Ai was still too defensive and paranoid to see this at first. He just assumed Estraven was against him as well. He did not offer Estraven the benefit of the doubt, and continued to mistrust her.

The Gethenians fear Genly Ai because he is different as well. When Estraven was commenting on why the Orgota (inhabitants of the Orgoreyn nation on Gethen) fear Genly Ai, she explains a general Gethenian fear, "These Orgota have not the wits nor size of spirit to fear what is truly and immensely strange. They cannot even see it. They look at the man from another world and see what? a spy from Karhide, a pervert, an agent, a sorry little political Unit like themselves" (161).

Estraven came to the conclusion early on, "His [Genly's] obtuseness is ignorance. His arrogance is ignorance. He is ignorant of us: we of him..." (151). Estraven does not subject Genly to the same ideals and stereotypes of the average Gethenian. He acknowledges Genly's differences, but is biased because of them. He actually feels kind of ashamed that he didn't realize that Genly was no different earlier.

Ironically, Estraven, the more alien of the two (based on our notion of gender), learns to trust Genly first. After all, Genly is the real alien in the novel. Genly knew what he was up against before he set out, but Estraven has nothing else to go on. He accepts Genly for what he is.

Estraven exclaims to Genly Ai, "The fact is that you're unable, or unwilling, to believe in the fact that I believe you" (199). Genly is finally able to see Estraven for who he really is. He realizes that Estraven is a unique Gethenian because he didn't let his fear override him. Estraven trusts Genly, and now Genly will be able to trust Estraven.

Even after Estraven's confession that he trusts him, Genly Ai still tries to see Estraven in gendered terms. He describes Estraven as possessing a feminine "refusal of the abstract" (212) and as having "no standards of manliness, or virility" (218). Genly doesn't necessarily see these as bad attributes; it is just that he refuses to let go of his gendered ideas as Estraven has let go of his genderless ones.

Genly Ai's steadfast hold onto these gender ideas typifies our society's inability to see outside of gender. Genly Ai's, as well as our own, understanding of people in the context of gender is almost as if he (and we) was brainwashed into

seeing people in these distinct, gendered categories. The fact is we were all strictly instructed since birth how to act, how to look, and how to present ourselves to others with very little fluidity.

All through our lives, just as Genly, we have been expected to conform to gender stereotypes and, in most cases, were frowned upon if we did not. Genly's reaction to the Gethenian world and his inability to let go of his gender perspective implies an almost dysfunctional need to hold on to these notions. Genly's gender ideas are tied into his own personal security, his "shifgredor." For him to completely let go of these stereotypes and categories, would mean that Genly would have to question his own being. All his life he has considered himself a man before he has considered himself a human. For us Westerners to take on this Gethenian refusal of gender, we would have to reconstruct our entire notion of what it is to be human.

Genly Ai describes his acceptance of Estraven:

He had been quite right to say that he, the only person on Gethen who trusted me, was the only Gethenian I distrusted. For he was the only one who had entirely accepted me as a human being: who had liked me personally and given me entire personal loyalty....I had not wanted to give my trust, my friendship to a man who was a woman, a woman who was a man. (248)

Genly finally does accept Estraven and trust him, and I like to think he learned something about human nature from his experience. In fact, when his ship returns to pick him up and he sees a woman again after such a long time, he finds it difficult not to see his own kind as alien. For the short time between his acceptance of Estraven and Estraven's death, Genly let his guard down and was part of a relationship built on mutual acceptance, trust, and loyalty.

Ideally, our society should adopt a Gethenian outlook on humanity. We would no longer be restricted by rigid stereotypes and we could be free to be who we are and be confident that we will be accepted. In reality, our world will never become a Gethenian world. It would mean uprooting all of our ideas and philosophies about who we are and what we can become. Our entire sense of self would have to be reconstructed, and I am not sure our society would benefit, or is even able, to take on such a task. Estraven accomplished this with ease because she has no preconceived gender notions to overcome.

Genly Ai and Estraven formed a true friendship. They both had to work at it. They refused to allow the notions of gender and humanity that were embedded in their minds to cloud their view of the other person. Their relationship draws attention to the role that gender plays in our society and in others as well. By distorting the message, Ursula Le Guin showed how strong an influence gender is in our society and how it controls the way we see the world. To say that our

world should become a Gethenian one would be unrealistic because it is so opposite to the way we truly are. Gender controls us. The goal should be to learn to adopt a more Gethenian outlook and accept people as individuals rather than as only a man or a woman.

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## Why are Diagnoses of Women Based on the Symptoms of Men?

*Nicole Leo*

### Introduction

Researchers have recently been debating whether there is a gender bias in clinical decision making. Physicians may presume that women have the same disease-related symptoms as do men, and thus fail to give a correct diagnosis and method of treatment. Although both men and women are afflicted with some of the same diseases, their symptoms are sometimes very different. This has been shown in cases of heart disease and AIDS. So why is it that some doctors seem to unknowingly bias their diagnoses? Biological differences and social attitudes may contribute to this gender bias. However, the lack of research including women may be the most important factor. The purpose of this paper is to examine gender bias in diagnoses, using case studies of heart disease and AIDS.

### Heart Disease and Treatment

The risk factors for heart disease are similar for men and women: smoking, diabetes, high blood pressure, and high cholesterol. However, symptoms of heart disease usually develop in women after menopause, about ten years later than in men. Also, the first sign that a man has heart disease is typically a heart attack, whereas in a woman, the sign is likely to be angina—intermittent chest pain (Costello & Stone, 1994). Studies have shown that when women do have heart attacks, their coronary risk factors were more prevalent and more severe than in men before their infarction. However they were less likely than men to have undergone procedures that are known, at least in men, to initially miss the diagnosis of heart disease and leave it untreated. Men are twice as likely as women to receive state-of-the-art therapy for heart attacks. They receive both thrombolytics and balloon angioplasty about twice as often as do women, and the rate of bypass surgery on men compared to women is 45% to 27% respectively. Women are also less likely to be referred for cardiac catheterization, a critical diagnostic test, despite their reporting greater disability than men as a result of their reporting greater disability than men as a result of their anginal symptoms (Drug Research Reports, 1991 b; Altman, 1991).

Two studies reported in the *New England Journal of Medicine* documented this pattern of treating women less aggressively than men (Altman, 1991; Trafford, 1991). The first was a study of more than 2,000 male and female heart attack vic-

tims at 112 hospitals. It was found that although the women had reported more disabling chest pains than men, they were only half as likely to have received coronary bypass surgery. The second study, which consists of 82,000 patients treated in hospitals in Maryland and Massachusetts for heart disease, reported similar results and found also that women lagged in receiving coronary angioplasty.

It is possible that men are getting too much treatment rather than women too little. However, researchers seem to suspect that women with the same or worse symptoms are not taken as seriously as men by the medical profession, especially when the problem is considered a "man's disease." This is because gender bias is not confined to heart disease. According to the American Medical Association's Council of Ethical and Judicial Affairs, it is also found in diagnoses of lung cancer and the use of kidney dialysis and transplantation (Trafford, 1991).

Once a woman has had a heart attack, she is as likely as a man to undergo surgical intervention (Drug Research Reports, 1991 a). This has been labeled the "Yentl syndrome" after the heroine of a story who disguised herself as a man to attend school and study the Talmud. The Yentl syndrome implies that once a woman shows that she is just like a man by having severe coronary disease or a myocardial infarction, then she will be treated as a man would be treated.

### Research On Heart Disease

Years of sex-exclusive research have reinforced the myth that coronary disease is a uniquely male affliction and have generated data sets in which men are the normative standard. This continues despite the fact that cardiovascular disease is the leading cause of death in women in the United States (Council on Ethical and Judicial Affairs, 1991). These male-generated findings have led to biased standards of care and have prevented consideration of vital aspects of coronary disease in women. For example, estrogen plays an important role in both the primary and secondary prevention of coronary disease in women. However, even studies of estrogen-therapy have been carried out using only men (Drug Research Reports, 1991 a).

The Physicians' Health Study, which tested the prophylactic effects of aspirin on heart disease, revealed other factors that leave women out of research (Palca, 1990). Only men were used because in the early 1980's, when this study was done, only 10% of physicians over forty years old were women. And, while one in five men could be expected to have a significant coronary event by the time they were sixty, only one in seventeen women were expected to have the same. In order to get adequate statistical power to make conclusions about both sexes, an incredibly large subject pool would be needed. It was concluded that a sufficient number of women to participate in the study could not be found.

Because relatively fewer middle-aged women have heart disease, many more of them must be studied to produce the same amount of information on the dis-

ease. This could greatly increase the cost of research. This problem is created because most research studies employ age limits which exclude volunteers older than 60, the age after which most women have heart disease (Altman, 1991). Budget constraints have caused experimenters to "retreat back to the most simple homogeneous sample: white males," states Dr. Jerry Avorn of Harvard Medical School (Cotton, 1990). However, not enough studies have been done using subjects other than white males to shed any light on whether they are truly the best subjects to use.

Pregnancy and the menstrual cycle are considered to be confounding factors in studies on women (Cotton, 1990). It is believed that the changing levels of hormones during menstruation may distort experimental results (Segawa, 1991). Researchers also are often afraid to include women in their child-bearing years in studies because of concern that the treatment may affect fertility. Thus, current therapies used to treat heart attacks may not be directly applicable to the care of women, who respond differently than men to both medical and surgical treatments for heart disease (O'Connor, 1992).

### Origins of Gender Bias

The findings of the Framingham study in 1948 have been very influential on heart disease research conducted over the past few decades. Because two-thirds of the women studied were pre-menopausal, the initial reports found that few women had evidence of heart disease. This reinforced the conviction that heart disease was an affliction of middle-aged men. These findings may have also contributed to a false sense of security about heart disease in women. Medical students have long been taught that one of the primary risk factors for heart disease is maleness, and women have tended to think of heart disease as something that happens to their husbands (Altman, 1991).

Because most studies of preventing, diagnosing, and treating heart disease have involved only men, doctors are ignorant of how to recognize and treat heart disease in women (Altman, 1991). Tests for heart disease that are reliable for men, such as the standard exercise test, give false results in women. It seems that women have a different physiological response than men to exercise (Altman, 1991).

Another study suggests the gender bias in medical advertising may contribute to differential treatment of women and men by physicians (Leppard, Ogletree, & Wallem, 1993); 440 advertisements from three prominent medical journals were analyzed. The results revealed significantly more male recipient ads were found overall. The treatment of men and women in these ads may, in some way, affect the way doctors treat their patients.

It seems that more physicians are more likely to attribute women's health complaints to emotional rather than physical causes (Council on Ethical and Judicial Affairs, 1991). Women's greater use of health care services has been perceived to be due to "over-anxiousness" about their health. Societal value judgments placed

on gender roles may also put women at a disadvantage in the context of receiving certain major medical interventions, such as organ transplant or cardiac catheterization (Council on Ethical and Judicial Affairs, 1991). For example, middle-aged women are half as likely as men to get a kidney transplant or to undergo a diagnostic test for lung cancer, according to the American Medical Association (Trafford, 1991). The general perception that men's social role obligations are more important than women's, such as providing for a family, may account for the differences in treatment between men and women. This does not mean to imply that physicians often put women in life-threatening situations. For example, a successful kidney transplant is much less cumbersome than dialysis, and men are considered to have less flexible schedules than women because of their responsibilities.

A woman is more likely than a man to die of a heart attack, or to have a second heart attack, most likely because they were not treated aggressively enough (Becker, 1990). Investigator Charles Maynard states that doctors simply are more comfortable prescribing newer, more aggressive therapies to men because they have more experience with male patients and heart disease (Drug Research Reports, 1991 b).

However, many cardiologists deny any gender bias in their practice. They conclude that there is another explanation for the differences in treatment: differences in age and severity of the disease ("Age not Bias," 1994). Women are typically 10 to 15 years older than men when they develop heart disease. Doctors are often reluctant to recommend invasive tests for elderly patients who have other health problems besides heart disease.

Many cardiac surgeons have reported that women fare less well than men after bypass surgery. This is attributed to the smaller arteries in women and the advanced age at which they have such operations (Altman, 1991). In addition, as researchers focus more on heart disease in women, they are questioning whether the poorer surgical results reflect the tendency for more women to have bypass operations on an emergency basis, rather than electively (Altman, 1991). At any age, and in either sex, emergency surgery is riskier.

Dr. Daniel Mark of Duke University found that when men and women had similar symptoms, the only difference was gender, treatments were similar ("Age not Bias," 1994). One study examined the thinking of 15 cardiologists who sent 280 men and 130 women to have exercise tests for suspected heart disease. All the doctors filled out questionnaires about how long they thought patients would live and whether they felt angiograms would find blockages. It was found that men were substantially more likely than women to receive angiograms. However, the doctors stated that the differences in their conditions were the reason. On the questionnaires, doctors did often predict the condition of women's hearts. They sometimes even tended to overestimate the chance that women would be found to have severe heart disease ("Age, not Bias," 1994).

### Acquired Immune Deficiency Syndrome (AIDS)

Another area of concern in gender bias in diagnoses is AIDS. For years women have been under-represented in official data concerning AIDS. The diagnoses of AIDS depends not only upon demonstrated infection with the human immunodeficiency virus (HIV), but also upon the clinical manifestations of the disease. Because those affected first were almost exclusively gay white men, the case definition of AIDS was centered on how the disease was manifested in men. It did not represent the experiences of those groups increasingly affected by HIV, particularly women, who often develop different symptoms (Gladwell & Booth, 1991; Navarro, 1991).

The AIDS definition was developed by the Centers for Disease Control (CDC) to track the spread of the disease and was designed for surveillance purposes only (Gladwell & Booth, 1991). However, the list of life-threatening illnesses the CDC had originally defined as AIDS was used by a number of public and private agencies to decide who automatically qualifies for benefits such as disability payments and subsidized housing (Navarro, 1991). Many women with HIV/AIDS did not qualify for these benefits because their symptoms did not fit the CDC's definition.

This early definition of AIDS also prevented many early diagnoses and treatments because doctors often failed to recognize conditions outside the list as being related to the HIV virus. Most doctors readily thought of AIDS when they saw Kaposi's sarcoma, a skin cancer classified as an AIDS-defining illness, but they were less likely to think of AIDS when faced with the gynecological disorders often experienced by women (Gladwell & Booth, 1991).

Because women were not considered to be a high risk group for contracting HIV, gynecologic conditions were not included as manifestations of HIV infection. If a woman's disease showed the same infections as a man's, it may have been recognized as AIDS. However, if the infections, although HIV related, were different, the woman would not have been considered to have AIDS. For example, HIV-infected women with pelvic inflammatory disease (PID) were not categorized as having AIDS despite the fact that many doctors found that these infections were much worse in HIV-infected women. PID in HIV-infected women is also less likely to be cured by ordinary therapy (McKenzie, 1991).

Thrush, a yeast infection of the mouth that affects both men and women, is officially used as one of the criteria for a pre-AIDS condition. However, consistent vaginal yeast infections in women, not cured by ordinary therapy, were not categorized as an AIDS-related condition. Also, reports indicated that HIV-infected women have dramatically higher rates of abnormal Pap smears and cervical cancer than uninfected women. Many women died from cervical cancer, a potentially treatable disease, before they died from AIDS as officially defined (McKenzie, 1991).

Another problem: similar AIDS-related symptoms in both men and women are interpreted, investigated, and treated differently, because women are not expected to have AIDS. For example, women with *pneumocystis carinii* pneumonia (PCP), a common opportunistic infection in AIDS patients, were more likely to be treated for minor respiratory ailments and not for PCP (McKenzie, 1991).

In 1993, the CDC added cervical cancer and a CD-4 lymphocyte count of less than 200 to its diagnostic list. Although this case definition allows more women to be included, researchers say. Others disagree. Dr. Gary Noble, deputy director of the CDC, stated that continuously adding diseases to the list would seriously hamper the ability to follow the epidemic and infection trends (Gladwell & Booth, 1991). The CDC believes that although a condition like PID can be more severe and less responsive to treatment in infected women, it is also seen in thousands of uninfected women. Thus, its links to the HIV virus is unclear and the condition is less reliable for purposes of monitoring AIDS (Gladwell & Booth, 1991).

The problem of the "missing women" in the AIDS epidemic goes beyond epidemiology (McKenzie, 1991). Women have been forgotten in every aspect of AIDS treatment. Women have been excluded from experimental drug and other treatment regimens designed for male patients. There is little information available to help physicians understand and treat HIV-related gynecologic conditions in women.

Previously, women were seldom thought of as being possible victims of AIDS, but only vectors through which others could contract the disease. Women were seen as the mothers who gave AIDS to their children and prostitutes who gave the virus to men. This has severely hampered diagnoses.

### Conclusion

Women have suffered from the lack of consideration concerning the differences between their medical conditions and those of men. As each new disease is researched, time and again, men become the normative standard for disease symptoms and manifestations. In addition, men are the majority of participants in experimental treatment studies, excluding any differences that may be found in women. Many medical treatments now used on women are based on studies conducted entirely on men. Studies should be done to find out if treatments successful for men are equally successful for women. It is time for scientists to realize that women's bodies are different from men's bodies.

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## The Theme of Escape in *Ragtime* by E.L. Doctorow and *A Farewell to Arms* by Ernest Hemingway

Rabia Choudry

The theme of escape in the American novel no longer parallels colonial America and the exploration of the frontier. Sam Bluefarb describes this previous theme in *The Escape Motif in the American Novel* by stating that, "Although the theme of flight may be seen in other literatures, it is only in American literature, particularly the American novel, that the preoccupation begins to loom large, begins to represent what is most characteristically American—the urge to be forever wandering into new territories...to be on the move..." (Bluefarb 7). This characterization has been modified to read, "the very urge to escape—after the Civil War especially, but most especially in the twentieth century—was born out of desperation and hopelessness, so that escape finally became not so much an act of hope, optimism, and...self-reliance as of hopelessness and confusion" (Bluefarb 3). In accordance with the latter of these two ideas are many of the characters of *Ragtime* and Frederic Henry of *Farewell to Arms*. As Sinclair Lewis once said, "In a passionate escape there must be not only a place from which to flee but a place to which to flee" (Bluefarb iii). Incorporating this into their novels *Ragtime* and *Farewell to Arms*, E.L. Doctorow and Ernest Hemingway have developed a theme of escape which suggests that people choose very different forms of escape depending upon their particular situation. Each author has enhanced his theme through a simple writing style. The simple sentences refer to the characters' regression to a childlike state as a means of escape. The authors aspire to portray the futility of life if one refuses to deal with its trials and tribulations.

The character who establishes the theme in *Ragtime* is Harry Houdini, a famous escape artist. Houdini entertains his audiences by defying death, so that "death is the end point and origin of [his quest]" (Morris 107). His art, as well as his name, are his forms of escape, for Houdini's name was originally Eric Weiss. He learns that his pseudonym cannot help him to escape. His only escape from his life is through death, and not through the dramatic portrayal of it. He also learns, after his mother dies, that no one can escape the finality of death. "Like Houdini, the narrator demonstrates that both writer and reader, performer and audience, are escape artists. It is as if the attempt to represent must necessarily delude with the false promise of escape in the face of necessity" (Morris 108-9). And there definitely is a need for escape, an escape from the conditions and realities of "this time in history...too many lived to a room. There was no sanitation. The streets reeked of shit. Children died of mild colds and slight rashes. Children

died on beds made of two kitchen chairs pushed together. They died on floors...." (Doctorow 18).

The middle to lower class who lived in these slums during pre-World War I America would have envied Mother's Younger Brother of *Ragtime*. He lives with his sister in her New Rochelle home, and takes part in her portrayal of the American dream. He leads a simple life working for his brother-in-law making bombs. Eventually, he too must learn about the "false promise of escape." After he and Evelyn Nesbit have a very passionate love affair, she deserts him. Doctorow describes Younger Brother's need to escape from this situation: "He stood between the milk cars going up to New Rochelle. He considered throwing himself under the wheels. He listens to their rhythm, their steady clacking, like the left hand of a rag. The screeching and pounding of metal on metal where the first two cars joined was the syncopating right hand. It was a suicide rag...." (Doctorow 170). At the time, Mother's Younger Brother does not realize that the only escape from his life is death also. He searches for another means of escape and finds himself amidst the gang of Coalhouse Walker, Jr., who is a black man infuriated by the way he and his property are treated by the firemen of the Emerald Isle firehouse. Younger Brother is willing to suffer the reputation of being a white man in a black gang, for the sake of fleeing his former life. Following a long period of making demands and attacking the firehouse, Walker and his gang occupy the famous J.P. Morgan library. "After the fire chief, Willie Conklin (the craven racist responsible for the entire affair), is forced to rebuild Walker's Ford in front of the Morgan library, the police allow the little band of Walker's followers to escape in return for his surrender...." (Harter 52). As Walker is about to surrender to his own execution, Younger Brother says, "What you are doing is betraying us. Either we all ought to go free or we all ought to die" (Doctorow 304). He realizes he will have to leave if Walker dies and also exhibits his envy of Walker's successful escape. After Walker is shot, Younger Brother has no choice but to flee once again.

"Younger Brother successfully escapes even farther south, eventually ending up amidst the Mexican Revolution where, fighting for Zapata he is finally killed" (Harter 52). Harter and Thompson consider Younger Brother's release from punishment a "successful escape." However, this "success" leads him to flee once more. As Lewis said, there must be a "place to which to flee," implying a place from which one should not have to escape.

Eventually both Mother's Younger Brother and Coalhouse Walker find this place: death. Coalhouse, too, spends his entire life in flight. "Inheriting a history of neglect, abuse, and exploitation, Coalhouse Walker embodies the claims of a new history upon America, especially upon the middle class as represented by Mother and Father" (Parks 10). Critics often refer to him as the anachronism of the ragtime era. They see him as a late 1960s black radical. Jeffrey Hart characterizes him as a "consistently admirable character" and as a "ragtime piano player who, after being victimized by some white toughs, becomes a violent revolution-

ary" (Hart 892-3). Walker appears, to these critics as one who favors his race and one who would accept his race's support in a time of need. This view is the antithesis of Father's beliefs. In Father's mind, Walker neglects his own race: "It occurred to father one day that Coalhouse didn't know he was a negro. The more he talked about this the more true it seemed. Walker didn't act or talk like a colored man. He seemed to be able to transform the customary deference practiced by his race so that they reflected to his own dignity rather than the recipient's" (Doctorow 168).

Walker's role in the novel clarifies the meaning of the title for the reader as Harry Houdini elucidates the theme. He is an African-American who has escaped the stereotype of his race. He has received an education and is a ragtime pianist. "Do not play this piece fast. It is never right to play Ragtime fast...." is how Scott Joplin explains the ragtime era. His explanation demonstrates how the theme of escape can be expanded to include regression. The moral here would be not to let childhood pass by too quickly. Regression is a defense mechanism by which one reverts to a childlike state of mind. This is effectively portrayed through the simple sentences in the book. The novel can be read very quickly, like a children's storybook. "It may seem to the hasty reader who has ignored the injunction not to play this piece fast" that a kind of surface Dick-and-Jane-and-Spot prose has been utilized to increase the reader's sense of the childlike atmosphere of the time (Grumbach 42). John Parks claims that the narrator of the novel is the little boy, the son of the simply named Mother and Father, who is now grown up. Parks describes the ragtime era to which he wishes he could return: "...as the little boy's book, the novel is the result of the warning from the present read into the past. The present, of course, knows what the past does not. The warning therefore functions as a hidden clue to a possible destiny...." (Parks 64), perhaps the destiny of reverting back to childhood.

Simple sentences are used in both novels to enhance the complex concept of regression. Frederic Henry, too, reverts to a childlike state in *A Farewell to Arms* by Ernest Hemingway. Henry's regression is also enhanced by a simple writing style. Hemingway's novels, like those of Doctorow, flow like music. In this particular passage, Frederic Henry speaks in simple sentences about his regression: "Don't talk about the war,' I said. The war was a long way away. Maybe there was no war. Then I realized it was over for me. But I did not have the feeling that it was really over. I had the feeling of a boy who thinks of what is happening at a certain hour at the schoolhouse from which he has played truant" (Hemingway 245).

Because Frederic Henry flees the war throughout the novel, the theme of escape is much more apparent than it is in *Ragtime*. Conversely, it is easier to perceive regression as a means of escape in *Ragtime* than it is to see it in *A Farewell to Arms*. "Henry's escape thus points to survival rather than to moral rebellion" (Bluefarb 85).

Henry is an ambulance driver for the Italian army during World War I. When Catherine Barkley, an English nurse and his future lover, asks why he joined the Italian army since he is an American, he responds, "I was in Italy and I spoke Italian" (Hemingway 22). "He follows and gives orders as required, but hardly as a consequence of patriotism or dedication to any cause" (Bloom 97). Henry feels no need to flee from the war until he falls in love with Catherine Barkley. Bluefarb describes this flight in *The Escape Motif in the American Novel*.

In this novel of love and war, Catherine Barkley represents the escape from war into love and into life. Henry's love for Catherine "...not only is an integral part of the pattern of escape but its very nature and the circumstances under which it takes place, serves to highlight the death and futility of the war itself; for in love there is at least the possibility of a renewal of life. And certainly by its very nature, even in the most hopeless periods of trial and flight, there is hope. The violence of the war only serves to point up the precious fragility of the love between Lieutenant Henry and nurse Catherine Barkley. Thus, though it may sound like a callous judgment, Henry's love for Catherine in its initial stages at least—is another form of escape from the war's violence and sterility; more, it is a counterpart (or counterpoint) to that violence and sterility" (Bluefarb 88-9).

Unlike Henry, who runs away from war to reach his future, Mother's Younger Brother runs toward war to escape his past. They are both representative of Doctorow's and Hemingway's theme of how different characters react to their desire to escape. Although Younger Brother, Walker, and Houdini cannot escape from life to a concrete place, Henry does have this option of completing Sinclair Lewis' "passionate escape." His desire is to escape the war. He achieves mentally in doing so by falling in love with Catherine. However, this is simply his way of forgetting about the war. *A Farewell to Arms* deals with a mental escape within a larger escape, through which Henry physically absconds the war.

Although Henry's escape is a microcosmic example of the larger escape (or retreat) of the Italian army, it is paradoxically the great escape of the novel; for in that escape both the larger escape—the Caporetto retreat—and the entire senselessness of the war itself are made concrete. Just as the larger escape represents panic on a mass scale, so Henry's smaller escape represents the powerful instinct for self-preservation. Thus when Henry makes up his mind to flee, it is not so much his mind that determines his action as it is the instinct to survive. Instinct is the impelling force here (Bluefarb 89).

A particular nurse, Miss Van Campen, realizes that Henry no longer wishes to fight in the war after he has been injured. She accuses him of purposely landing himself in the hospital to avoid the war front. "I suppose that you can't be blamed for not wanting to go back to the front. But I should think you would try something more intelligent than producing jaundice with alcoholism." She goes on to say, "I have known many men to escape the front through self-inflicted wounds" (Hemingway 144).

Henry is eventually released from the hospital. Next, during his retreat to Caporetto, he serves as a "moral policeman." He stops his men from looting and shoots one of the sergeants who refuses to help remove their ambulance which is lodged in mud. "Frederic sticks to his mission and his men up to the point when he must either escape or be executed" (Bloom 104). Henry does not want to die like Younger Brother. He wants to survive and find Catherine to feel the relief of escaping the war both mentally and physically. When he is faced with either the option of escape or execution, he chooses escape, even though it may be fatal. He refuses to give up survival. Hemingway describes his choice in the novel: "I looked at the carabinieri. They were looking at the newcomers. The others were looking at the colonel. I ducked down, pushed between the two men, and ran for the river, my head down. I tripped at the edge and went in with a splash" (Hemingway 327).

Finally, Henry eludes the Italian army permanently. He lives with Catherine in Switzerland where, he tells the reader, they have a fine life. Hoping to leave behind his identity of taking part in the war, Henry grows a beard and wears civilian clothes. His escape or "separate peace" (Bradbury 59) is a success until it is somewhat hindered by the death of Catherine and the stillbirth of their child. Here he realizes the finality of death, as Houdini learns by trying to spiritually contact his deceased mother. But Henry is not like the characters of *Ragtime*. His means of escape is not death, it is love. He avoids his own death throughout the novel aspiring a life with Catherine. When she and the baby die, he accepts it. "That was what you did. You died. You did not know what it was about. You never had time to learn. They threw you in and told the rules and the first time they caught you off base they killed you" (Hemingway 327). The reader understands that Henry can escape the hardships of reality since he is able to retell his story. Although his means of escape is taken away from him, he continues to live and endures his flight through his memories. Through characters like Frederic Henry, Mother's Younger Brother, and Coalhouse Walker, Jr. and the historical figure of Harry Houdini, the reader learns that the necessity of escape is dealt with differently depending upon the conditions of the situation. Hemingway and Doctorow portray a variety of means and outcomes of escape and also demonstrate a similarity: regression as a path to part from reality. As Richard Todd wrote in *Atlantic Monthly*, "we are all trapped in history, whose patterns are sad and nefarious—though they are also rather exhilarating and swell, since they exonerate us from small duties" (Todd 96). The use of this theme is best described by Doctorow himself (in reference to Houdini): "Today, nearly fifty years since his death, the audience for escape is even larger" (Doctorow 8).

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## Breast Feeding: Trends and Controversies

Dianne Shelton

### Introduction

For as long as women have been having babies, women have been breast feeding them. Up until this century, with the exception of wet nurses, women had no choice but to breast feed their babies because there were no alternatives. Now women have many choices—they can breast feed their babies full time, they can breast feed at times and formula feed at others, or they can formula feed at all times. Even with infant formula women still have choices—powder, soy, liquid, or liquid concentrate formula.

Of particular interest to me is why the percentage of women breast feeding fluctuates both in the United States and abroad. The incidence of breast feeding in the United States fell from the 1940s through the 1960s, when the majority of U.S. women bottle fed. The rate rose during the 1970s and early 1980s, and then began to fall again after 1983 (Auerbach, 1989). Why is it that the occurrence of women breast feeding changes so frequently? Why do so many women feed their babies in a different way than they were fed as babies? What role has the corporate community played in the decision that women make? I intend to examine the history of breast feeding, changing trends in the United States, the marketing techniques used for infant formula, third world marketing techniques, and current trends.

### History of Breast Feeding

Breast feeding is the most obvious, natural, convenient, and economical way for mothers to feed their babies. In most countries and cultures, breast feeding is the only option for women. However, for centuries, many women have been attempting to find other ways to feed their children. For some women, it was a matter of need—they had medical conditions that made it impossible for them to breast feed. For others, it was a matter of convenience or perceived needs. Prior to the twentieth century, people in "high" society in many countries felt that breast feeding was something for the lower classes; therefore they hired wet nurses to breast feed their babies. Prior to the invention of infant formula, many orphanages in Europe hired wet nurses to feed babies without mothers (Fildes, 1986).

In ancient societies in the Middle East, breast feeding was viewed as an important aspect of motherhood, and mothers were revered. "High regard for lactating

women is implied in the wealth of images of mother goddesses, usually shown holding or sucking an infant" (Fildes, 1986). While it is believed that more wealthy women in ancient societies generally hired wet nurses, "Not all well-to-do mothers necessarily employed wet nurses. A vase dating from 440 B.C. shows a rare scene of a relatively wealthy mother, the legitimate wife, breast feeding her child while her husband looks on" (Fildes, 1986).

Attitudes toward infant feeding have changed over the centuries, especially in Europe. While breast feeding by far still prevailed, wet nurses were widely used during the 16th and 17th centuries in Europe. Women in the middle class wanted to emulate the upper classes, so many of them chose to hire wet nurses as well. "Wet nursing was popular among wealthy English women from 1500-1700, when even middle-class women hired wet nurses" (Van Esterick, 1989). The majority of these women had no reason why they could not breast feed their own children; it just became the norm for women of their class. "It was probably the case that many women used wet nurses because it was the custom or fashion, without thinking very deeply about it—in the same, often, unthinking, way that some women today employ bottle feeding" (Fildes, 1986). These trends away from breast feeding were much more noticeable in urban areas of western Europe where class level was very important, and breast feeding one's child began to be seen as a sign of the lower classes. These trends were also visible in other parts of the world, including the United States.

### **Changing Trends in the United States**

Ever since the invention of infant formula in the latter part of the 19th century, the rates of women who chose to breast feed their babies have gone up and down. There are many factors that influence these rates, from doctors to advertisers to simple changes in lifestyles. These factors change just as the rates of breast feeding do.

This century has developed into a technology-oriented society—new developments in technology are viewed as positive aspects of our culture. People are pioneering who want to advance ahead of other societies to make better and more technologies available. One of the most recognized ways to advance is through medicine and the technologies associated with it. As infant formula was introduced, doctors viewed it as a new technological advancement. They welcomed this "breakthrough" with open arms, claiming that this freed women of the "burden" associated with having to breast feed their babies. Doctors began recommending infant formula to their patients, who took the advice as the gospel truth. "Both food- and drug-based companies producing infant formula expanded their markets during the post-World War II baby boom, as breast feeding halved between 1946 and 1956 in America, dropping to 25 percent at hospital discharge in 1967" (VanEsterick, 1989). In the period from the Depression until the 1950s, the vast majority of women allowed as much intervention in their pregnancy and

birth as their doctors recommended. During this time period, many women were completely unconscious when their babies were born. "The first generation of women thus treated, those giving birth from the 1920s through the 1950s, seem to have welcomed some of the changes. In the era of the feminine mystique, when mothering was considered a woman's greatest skill, childbirth and proper baby care were turned over to male authorities" (Katz-Rothman, 1991).

Despite these marketing efforts, during the late 1960s and early 1970s, there was a remarkable increase in the number of women in the United States who chose to breast feed. There are several reasons for this. The most significant was the growth of natural childbirth, the rise of midwifery, and the founding of the La Leche League.

The "natural" childbirth movement developed as a reform movement to do away with the excesses of medical management. The movement began in the United States over forty years ago with the publication of Grantly Dick Read's *Childbirth Without Fear*, but did not come of age until the 1950's and the introduction of the Lamaze technique of "childbirth without pain" (Katz-Rothman, 1991).

Women became more aware of what was happening to their bodies while they were giving birth because they were encouraged to read about childbirth and to be trained before the actual birth. Through this new revolution of education, women also began to recognize the real benefits of breast feeding.

La Leche League was founded in 1956 by two midwestern women. They were both breast feeding mothers who were dismayed to learn how few women were breast feeding their babies. "The League began with the idea that what was necessary for successful breast feeding was support and encouragement, which women were not getting elsewhere" (Katz-Rothman, 1991). Most women having babies in the 1950s were bottle fed themselves, thus their mothers were often not encouraging of their daughter's decision to breast feed. The medical profession still viewed pregnancy and birth as something that needed to be controlled, and thus were not encouraging their pregnant patients to breast feed. The La Leche League provided the support and information that women who wanted to breast feed could turn to.

As part of the movement toward more "natural" childbirth, the United States also saw an increase in the number of practicing midwives during the 1970s and 1980s. In 1975, there were 19,686 hospital births attended by midwives, and in 1989, there were 122,892 (American College of Nurse-Midwives, 1993). Midwives tend to view pregnancy and childbirth in a very different way than do doctors. Doctors tend to see their job to tend to the mother, and to hand the baby over to a pediatrician as soon as it is born. Midwives see their job to help both the mother and the baby; when the baby is born, the midwife inspects the baby and usually

visits the mother and the baby within a few days of the birth (Kate-Rothman, 1991). Since obstetricians do not see themselves as the baby's doctor, they generally do not offer the mother advice about breast feeding. Midwives see it as their responsibility to educate women on the many positive aspects of breast feeding. For instance, 99 percent of patients at Allentown Bethlehem Nurse Midwife Associates breast feed their babies, compared to 60 percent of the mothers giving birth with a doctor's assistance at St. Luke's Hospital in Bethlehem (Fulmer, 1994).

After World War II, the incidence of breast feeding began to decline. "In the United States in 1946, 38 per cent of infants were breast fed upon discharge from hospital. By 1966, the figure had dropped to only 18 percent" (Chetley, 1986). Similar numbers were found in Europe.

### Marketing of Infant Formula

Infant formula and baby foods did not become a part of the United States market until very late in the 19th century. Once companies such as Nestle, Bristol-Myers, Abbott, and American Home Products realized how to produce such foods, they needed to find a way to corner the market in this country (Van Esterick, 1989). They immediately realized that they themselves could not convince new mothers that their babies needed formula instead of breast milk, but that doctors, nurses, and hospitals could. "By 1960, new mothers were routinely given free samples of formula and information leaflets larded with formula ads subtly implying that breast feeding was difficult" (Palmer, 1991). Many formula manufacturers would give free samples to hospitals, who would then give the formula to the babies born there, often without the mother's permission. One mother said, "When I gave birth to my daughter Chisan, every service and product was itemized on the bill. I was charged for each cotton bud diaper and even for a teaspoon of sugar which was put in a bottle of water, but the Nestle milk they gave Chisan, against my wishes, was absolutely free" (Palmer, 1991).

Once these companies realized the power that those in the medical profession had, they sought to use this knowledge to their full advantage. They began to offer perks to doctors and hospitals that would promote infant formula. These included money, vacations, and parties. "Claude Didierjean, president of La Leche France and Pascale Carnus-Walter (IBFAM France) have confirmed that until recently money was given directly to the doctors and nurses at maternity units. Free trips to the Caribbean were also a favorite reward for distributing formula-milk" (Bader, 1994). While this may seem extremely unethical, it is not illegal in the United States. For the most part, the products that these companies were offering were not detrimental to babies' health and doctors were not forcing women to bottle feed. Once this routine of bottle feeding was established, it became a matter of custom and routine—almost all mothers bottle fed their babies. "The shift occurred first in the industrial countries of Europe and North America. This dramatic pattern soon spread to the developing countries of Asia, Africa, and North

America" (Chetley, 1986).

This form of informal marketing still exists today and is extremely effective. "When these gift packs are distributed, sales of the product go up; when they are not distributed, sales go down. One colleague reported that in her area, formula sales dropped 80 percent after her hospital stopped giving out formula gift packs" (Auerbach, 1989).

This practice has slowed in the United States because of public criticism, but it still is widespread in foreign countries. "France is one of the last European countries where breast feeding of babies is not promoted and where manufacturers of formula-milk have illegal commercial practices in maternity hospitals and clinics" (Bader, 1994). The vast majority of mothers in France formula feed their babies because this hospital marketing has led to a pattern of formula feeding that is difficult to break. Companies producing formula have agreements among themselves to share distribution times. Each company is given a certain slot of weeks when it is their turn to distribute their brand of formula, because it is well established that women will continue to use the brand of formula they were given for free (Bader, 1994). Even in recent years, hospitals in the United States have continued to allow free infant formula to be distributed to new mothers.

Most hospital staffs, rather than providing skilled care and assistance to new mothers, serve as unpaid representatives and advertising agents for the multimillion-dollar formula industry. They hand out "gift" packs to mothers as they leave the hospital—packs of artificial baby milk that the formula companies are only too happy to provide (Auerbach, 1989).

### **United States — Formula Marketing Techniques**

In the United States, infant formula manufacturers have used the same aggressive marketing techniques that they have in foreign and third world countries. However, this country has a safe water supply and a relatively literate community that ensures that babies will not die from dehydration and starvation. However, these aggressive and convincing methods still encourage hundreds of thousands of women to bottle feed their babies. Without any other information or knowledge, these women are inundated with positive information about infant formulas by their doctors, hospital personnel and commercial advertising. Many women are led into believing that it is easier, healthier, and more convenient to bottle feed their babies.

Due to the controversy and outrage surrounding Nestle's marketing strategies in the third world, many manufacturers have felt pressured to change their tactics somewhat. For example, Gerber, one of the most recognized manufacturers of infant formula, says in its television commercials, "Breast feeding is best. But if you need to bottle feed, use Gerber." This is a very interesting statement to make,

considering that the vast majority of women do not need to bottle feed. They choose to bottle feed out of personal reasons or for convenience's sake. Gerber also offers an 800 number and advises mothers that they can call if they have questions about how to feed their babies. They appear to be interested in helping people feed their babies, but then use it to promote their products, not to promote assistance.

### Third World Marketing Techniques

While many people are aware that these practices occur in the United States, many do not realize that this also occurs in the third world, often without regulation. Many women in third world nations deliver their infants at home. Formula manufacturers realized that they could not use doctors or hospitals exclusively to market their products because they would not be reaching their target market. Therefore, they developed a new tactic. They began a marketing technique that included, "radio jingles, giant billboards showing happy babies clutching tins of formula, and saleswomen in nurses' uniforms (known as 'milk nurses'), who gave the impression of medical endorsement as they distributed free samples. Mothers, eager to do their best, fell prey to company tactics" (Palmer, 1991).

Many charged that these practices were extremely unethical and careless. Many of the new mothers that these companies were targeting were illiterate and could not read the directions on the can. They believed these "nurses" and diligently used the free samples they were given. However, once the free samples were gone, the women had to buy the product. Often the formulas cost as much as a week's salary (Chetley, 1983), but without them, they could not feed their babies. The water used to mix with the formulas had to be boiled and sterilized before being used, and women who could not read were not aware of this. Women would, in an innocent effort to save money, dilute the formulas with often contaminated water, leading babies to ingest all sorts of pollutants. "Commercial formulas may be diluted with contaminated water, and refrigerated storage is frequently unavailable. Illiterate and impoverished mothers may dilute formulas improperly or purposely overdilute them in an attempt to save money for other essential needs" (Jason, 1991). Many of these babies would develop severe cases of diarrhea, leading to dehydration. Dehydration in small babies can cause permanent damage, including death. Malnutrition and diarrhea are the most important factors. Babies who are considered malnourished are those who are six to sixty months and who are below 80 percent of the median standard weights for their ages (Kent, 1991).

### Nestle Controversy

Beginning in the mid-1970s, international and medical organizations focused on Nestle as a prime user of the ethically suspect marketing techniques in third world countries. Organizations arose in response to Nestle's behavior. Formed in

1977, the two most powerful groups were the International Infant Formula Action Coalition (INFACT) and the International Baby Food Action Network (IBFAN). The main goal of these groups were to boycott Nestle products in an effort to force Nestle to change its practices. Since Nestle not only produced infant formula, but candy bars, pet food, and other goods, a widespread boycott was possible, because there was a wide array of products available to boycott.

While INFACT did not want to force formula manufacturers to stop selling formula in third world countries, or to promote breast feeding for all women, they simply wanted to change marketing practices.

The intention of INFACT is clearly stated in their demands:

1. An immediate halt to all promotion of infant formula.
2. An end to direct promotion to the consumer, including mass-media promotion and direct promotion through posters, calendars, baby care literature, shows, wrist bands, and baby bottles.
3. An end to the use of company "milk nurses."
4. An end to the distribution of free samples and supplies to hospitals, clinics, and homes of newborns.
5. An end to the promotion to the health professions and through health care institutions (Van Esterick, 1989).

INFACT's boycott was very successful. "In Toronto, for example, a market research firm found that 10 percent of the inhabitants of the city of two million were boycotting Nestle products. The Toronto City Council not only endorsed the boycott but urged removal of Nestle products from all civic premises." (Van Esterick, 1989) Nestle tried to counteract the boycott by hiring large public relations firms. However, they had to go through several firms because their tactics were not working.

In 1979, the World Health Organization (WHO) and UNICEF held joint meetings in an attempt to find a solution to the problems created by Nestle. In 1981, the meetings resulted in the WHO Code of Marketing for Breast milk Substitutes. This code granted INFACT's requests, and was passed later in 1981 with a vote of 118 in favor, three abstentions, and the United States the only country voting against the code (Sethi, 1994). Eventually Nestle agreed to INFACT's demands, however, some suspected that some of their techniques continued. The boycott was officially lifted in 1984 by INFACT.

The surprise and outrage created by the boycott and the publicity surrounding it definitely contributed to the increase of breast feeding during this time. Women became more aware of the benefits of breast feeding, and many also used breast feeding as a form of backlash against Nestle and other infant formula manufacturers.

### Current Trends

Since 1983, breast feeding again has been on the decline. However, the reasons for the decline seem to be not as closely tied to formula manufacturers as they have been in the past. Women's lifestyles are changing, and these changes are evolving into changing trends of feeding.

Currently, "Regardless of how many women could breast feed, a considerably smaller number actually decide to, and fewer still continue for any length of time. In the United States, 56 percent of mothers begin breast feeding. By four months, this figure is 28 percent; and by one year, only 8 percent of babies are still nursing" (Hormann, 1989). Essentially, once a mother and baby leave the hospital, breast feeding quickly declines.

Lack of information is one of the biggest reasons that women choose not to breast feed. It either did not occur to them, none of their friends did, or they have incorrect preconceived notions about what breast feeding entails. Many women believe it is messy or old-fashioned.

Many women would like to breast feed but cannot, due to careers. Some women who go back to work shortly after the birth of their babies have work environments that are simply not conducive to breast feeding. In order for a working woman to breast feed, she needs to be able to see her baby several times during the day, or must be allowed to pump her breast milk instead of feeding. For many women this is not practical, or their work environments do not allow it.

The growing number of teenage mothers, many of whom are poor, also has contributed to the decline in breast feeding. "The young mother is often encouraged to turn the baby over to her own mother, so that she can return to school or resume her previous activities" (Auerbach, 1989). These young mothers are less likely to receive prenatal care, let alone breast feeding advice. A lack of education and role models and the necessity of returning to a job greatly contribute to a woman's decision not to breast feed.

With increasing numbers of women in the military, active military duty poses a great problem for women who want to breast feed their babies. "More military women than ever before are having—and breast feeding—babies, but with the recent reduction of maternity leave from six to four weeks, new mothers are finding it difficult to establish their milk supply before returning to work" (Hormann, 1989). Women who are placed on night duty or sent to do field exercises find it very difficult to breast feed their babies. Many women must make a decision to resign from the military or face a discharge if they make the decision to breast feed. For many women this is not an option, as they need to pay back the military for educational benefits.

I called Gerber and asked them to send me any information about infant feeding. I received two brochures—one titled, "Breast Feeding—A Guide for Nursing Mothers" and the other, "Infant Nutrition—What to Feed Your Baby." The pam-

phlet on breast feeding was actually very convincing, with several pages about what to expect when breast feeding and who to go to if new mothers have problems. However, it ends with advertisements and coupons for bottles and pacifiers—an interesting end. The nutrition pamphlet was much more blatant in its advertising. The first page stated "Breast milk is best." However, from then on there are no mentions about breast feeding, only bottle feeding. The next seven pages contained titles such as, "What about infant formula?," "Types of infant formula," and "Gerber's family of formulas." The booklet then ends with a chart recommending which formula is appropriate for each age, as well as coupons for a free can of infant formula.

Gerber also used its phone service as a way to market their products. While my conclusions are not based on a scientific experiment, I do feel that they reflect what many companies do. I called the toll free number posing as a nursing mother. I said that I was a breast feeding mother attempting to use a breast pump because I was working and was not always at home to feed my baby. I said that I was having no troubles feeding my baby, just with using the breast pump. While the operator who answered my call was not rude or impolite, it was apparent to me that she was not interested in helping me use the breast pump. The first thing that she said to me was, "Have you tried formulas?" When I responded that I really was not interested in formulas, she said, "formula is something you really should consider. You don't have to worry about pumping, and babysitters find them much more convenient." She then continued to tell me about the different types of formulas that Gerber offered. The conversation ended with the operator never answering my questions, but with my name and address in the computer so she could send me information, which ended up being the pamphlet I mentioned earlier about infant nutrition. While I am sure that Gerber trains their operators to encourage the use of their products, it was interesting that this was marketed as a "feeding hotline," not an "advertising hotline."

### Conclusions

From the research I have conducted, there are several conclusions that I can make. Most importantly, I strongly believe that the percentage of women breast feeding in this country and abroad is very reliant on how much the infant formula industry tries to influence them. The numbers are also very related to how much education women have about the benefits of breast feeding. Many mothers in the world are not as educated as others and can easily fall prey to the manufacturer's tactics.

Beginning in the 1960s and 1970s, breast feeding rates began to rise, due to the start of the La Leche League and the rise of the natural childbirth movement. After the Depression, infant formula manufacturers increased their marketing strategies, and thus bottle feeding rates rose. As women became more educated about the benefits of breast feeding, more women began to breast feed, yet formula

manufacturers continued to refine and implement their marketing strategies. Today, breast feeding is not in the forefront of discussion as it was during the Nestle controversy, and work environments make breast feeding difficult. Hence, fewer women are now breast feeding than was the case 15-20 years ago.

As much as many would believe that Nestle's immoral conduct is over, the expansion to the third world continues. In the late 1980s, Nestle built factories that produce infant formula in both Sri Lanka and India. "Capitalizing on its experience in Sri Lanka and India, Nestle opened a powdered milk and baby cereal plant in China in 1990" (Rapoport, 1994). In 1990, the China plant produced 316 tons of infant formula and powdered milk. In 1994, they plan to produce 10,000 tons. Nestle also has the rights to be the only distributor of infant formula in China for the next 15 years. They have plans to increase their marketing in China to corner the market before it becomes open to other companies (Rapoport, 1994).

There is no indication that more women in the United States will breast feed their babies. If the developing pattern continues, one might conclude that breast feeding numbers will continue to fall, and will then begin to rise when women begin to become more aware of the benefits of breast feeding. Women must be encouraged to breast feed and taught that there is no real substitute. In the past, women knew intuitively and by watching other women that breast feeding was best. Today, women and the medical field must clarify and share this knowledge to insure the good health of babies all over the world.

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## Are Men and Women Equal?: Gender and Equality in Wana and Kadi Culture

*Misty Rose Saracino*

Studying the daily lives of the Wana and the Kodi, one would not find many differences. Both societies are egalitarian in their daily activities and day to day life. Understanding Wana and Kodi notions of gender demands one to recognize the dramatic inconsistencies in their views of human nature. The Wana's notion of gender unity clashes with the Kodi's notion of gender dualism, exemplifying the differences between the values of the centrist (Wana) and exchange (Kodi) archipelagos.

Anthropologists Jane Monnig Atkinson and Shelley Errington divided the Indonesian area into the two divergent "archipelagos" —the centrist and the exchange. They segregate the islands in this manner to categorize the areas by variations in marriage systems and gender relations (the differences in gender relations is the topic of this analysis).

The Wana tribe consists of small settlements with an economy based on rice cultivation, hunting and foraging. They reside in the mountains of the eastern section of Central Sulawesi (an Indonesian island). Occasionally, men will travel outside their tribe to trade rice, resin, or rattan (stem of tall pine tree) for cloth, salt, or metal objects with other societies (Atkinson 69). Since the Wana people are a self-contained unit, their political leadership is maintained on a local level.

The Kodi are situated on the western tip of Sumba in the Sunda Islands of Southern Indonesia. Janet Hoskins, the anthropologist who studied the Kodi, did not explicitly describe the Kodi economic system (however, I suspect it is very similar to the Wana's).

I will discuss five of the major differences and two of the similarities between the Wana and Kodi's social behavior. By showing how the two societies fit within their characteristic groups, the intrinsic separateness of the centrist (Wana) and exchange (Kodi) archipelagos will be demonstrated. The divergence between the two cultures' gender beliefs and access to power will explain why, even though the two cultures may behave similarly, the reasons behind their actions are very different.

The most fundamental distinction between the Wana and Kodi is their belief concerning the internal human soul and spirit. The Wana see men and women as made of the same kind of soul stuff. Spiritually, neither gender is above the other. And, in theory, each has the same access to spiritual potency and, therefore, power. In reality, it is rare and exemplary for a Wana woman to strive for and attain

spiritual potency. Most Wana women choose to remain in the village as mothers and wives. However, the key point is that the women are not denied access to spiritual growth and power.

The Kodi, on the other hand, think men and women are born with both a female and a male soul, each with distinct characteristics. Each person has the feminine, soft side and the masculine, strong side within them. This is essential to Kodi spiritual beliefs since all high deities have a gender-duality; all possess both female and male names and accompanying gender characteristics. So, on the secular level, all men and women possess both genders' traits, imitating the heavenly deities.

Like many of the centrist archipelagos, the Wana see men and women as unitary. They acknowledge anatomical differences and use them to express individuality. Men and women play an identical role in childbirth: they both menstruate, become pregnant, and possess the "source" of life. "White" blood (semen) is considered analogous to menstrual blood. The men are also considered to be pregnant first before they then transmit the unborn child to the woman via intercourse.

Wana men realize that childbirth is an extremely powerful process, and they want to believe they are part of it. In fact, men also use their perceived contribution to procreation for their benefit when they are venturing outside of the village. They use "womb-related magic" to protect them from the dangers of the outside world because childbirth is such a potent and magical process.

Another way Wana emphasize gender sameness is through their practice of superincision. This is an operation all male children must endure. A stick is set between the foreskin and the glans of the penis as the foreskin is slit up and down and finally folded back to reveal the glans (Atkinson 78). Out of this context, the process would be considered a way to stress gender separation, but the Wana perceive this process as necessary for maturity. Just as the girls menstruate before reaching maturity, the boys must undergo this superincision in order to shed their blood as an induced form of menstruation.

In this way, the Wana are not emphasizing gender differences, but rather are creating another common ground in the female and male life cycle.

The Kodi's notion of gender and procreation, on the other hand, is not a matter of unitary roles, but more of a duality. They believe that children are biologically made from the unity of blood within the woman. The man influences the children through decent and kinship.

Both the mother and the father's patriclan (kin from descent of a common male) contribute valuable attributes to the child. The mother gives knowledge, taboos, and witchcraft—her wild, uncontrollable power originating from the outside. The father leaves behind his land rights, lineage houses, and livestock—meaning his power remains on the inside, steady and unchanging. The power the mother and the father give to their children reflect Kodi notions of the nature of women and men, which I will discuss in more detail later.

Life-cycle rites are another cultural construction absent in the Wana society. This process is the most distinguished method of gender separation in Kodi culture. They believe that all children are born as potentials, with both female and male characteristics, and must be socialized to one side or the other. Therefore, the Kodi have created certain rituals to guide the children in becoming either male or female adults.

Shortly after childbirth, Kodi parents remove the hair over the soft portion of their children's heads to extract the inborn "animal" character. This is done because the children can not move into the adult world untamed. When they are in their adolescent years, their hairstyles then mark their gender differences in the context of their sexual maturity and their marital status.

Male circumcision is the most drastic measure the Kodi take to assure the separation of men and women. Janet Hoskins explains the reason for the ritual, "The excessive 'heat' of untamed masculinity has been reduced to a safer level, where it is compatible with balanced, human fertility and can combine fruitfully with female blood in conception" (300). The Kodi perform this procedure in order to remove the "animal" nature out of the boys. The men are throwing away their wild, female selves in order to become socially accepted males.

Hoskins describes the circumcision as a way of "reducing" men's masculinity because the Kodi favor balance as a sign of spiritual potency. She may have been attempting to explain the circumcision as a method of maintaining balance within the males, by not allowing the "heat" of masculinity to throw off that balance.

Both the Wana and Kodi perceive men as having greater access to power, but for different reasons. Atkinson describes Wana notions of men and women, "...[W]omen and men are fundamentally the same sort of beings who are differentiated primarily through their activities, not their fundamental nature" (79). Men's activities are more conducive to acquiring spiritual growth.

The essence of spiritual potency is believed to reside in the forests and lands outside the village. The men are the ones who have access to this through their traveling and hunting. Their upper-hand is due to their adventurous lifestyles, not to internal traits or spiritual levels.

As Atkinson suggests, men and women are the same, just that the men have the desire and courage to go on quests for spiritual potency. One of the blatant reasons for this lies in their anatomical difference—the penis. Men are taught to be braver due to their penises and also because they are more physically aggressive than women.

The penis is an asset when traveling alone in the forest. It is "hard and brave" and helps the men battle demons they might encounter. The forest is a dangerous place for women because they lack the extra strength provided by the penis.

In order for the women to gain spiritual knowledge, they must neglect their female duties and dedicate their lives to being brave. In addition to not having a penis, women are thought to be less violent by nature. When a woman does be-

come a shaman (one with great spiritual power), she tends to operate on a much smaller, local level than men do. And, at times, they work only within their household. This is because women lack the male desire for adventure and are encouraged by their society to remain that way.

Both the Wana and Kodi cultures permit gender-shifting. Gender-shifting describes an individual who chooses to deny their own inborn gender and emphasize the characteristics of the opposite gender.

For the Wana, gender-shifting is a socially acceptable lifestyle. They refer to those who do this as "bante." To become a bante, one must assimilate the dress or appearance (or both) of the opposite gender. This is considered easier for men than for women. Atkinson explains, "...the nature of gender-shifting is not symmetrical for women and men...maleness, for the Wana, appears to encompass both the basic humanity of women and men and men's extra edge as well" (92-3). A man must reject his masculinity and his quest for bravery in order to become a bante. Coinciding with this notion, men must also "sacrifice their penis" (as well as their bravery) to "become women." However, most men choose to do this metaphorically instead of through self-circumcision.

Women, on the other hand, in the Wana culture have an even more difficult task ahead of them if they choose to become bante. Women lack male genitals. The idea that a woman is attempting to be male without a penis is a challenge, as well as a disadvantage, to her since the penis is the essence of Wana masculinity. Nevertheless, women still continue to maintain their "male" status, and some are even thought to grow penises spontaneously.

Gender-shifting is a more complex issue in Kodi society (actually, calling it a "shift" is misrepresenting the situation). Kodi notions of the human soul limit a person's ability to be strictly male or female. Everyone has two components of their soul—a male and a female part. Depending on which you are, one component is emphasized—with the other still existing, only downplayed. Even when one becomes a Rato Nale or ritual specialist, both components must be balanced: you just have more freedom to act on behalf of both parts of your spirit, not just the gender you were born with.

Ritual specialists are humans who have created a balance between their female and male characteristics and have the ability to communicate with the deities. The Rato Nale is the most prominent example of this. Hoskins explains his access to power, "But the Rato Nale is powerful not only because he is a man, but because he has crossed the normal gender boundaries and demonstrated his ability to unite both male and female values in a single whole" (287). The Rato Nale must be permissive yet spiritually strong. He/she is the closest human representation of a deity and it is considered uncommon for a woman to possess the ability to create such a balance.

The Rato Nale is the closest the Kodi come to gender-shifting. This is the only way men may "become women." Hoskins concludes about the importance of this ability:

The separation of male and female elements in the human community allows for the possibility of exchange. But exchange is also founded on the division of what was once unified: the cosmic fusion of double-gendered deities. Thus complementarity is justified by an original fusion of both genders and by periodic returns to that fusion in ritual contexts. (305)

The notion of exchange is extremely important in Kodi society (thus the name exchange archipelago). By creating a balance of maleness and femaleness, a ritual specialist is able to communicate with both elements of the dual-gendered deities.

These Wana and Kodi notions of gender represent the ideas of the archipelagos they belong to. The Wana, being a centrist archipelago, is built around a unitary world with men and women being equal. The Kodi, being an exchange archipelago, is based on two separate worlds—that of the women and that of the men. These separate worlds exist in a complementary duality, with male and female traits being associated with each human being. Shelley Errington explains:

In the centrist archipelago it would seem that ritual and spiritual authority is conceived to be more an individual achievement than a categorical prerogative; but in Eastern Indonesia, as Boon implies, the categorical separation of men and women and male and female principles seems inevitable when the politics of exchange, on which these societies are predicated, requires it. (305)

The way Wana and Kodi feel about gender fit their respective centrist and exchange categories. But, more importantly, they reflect each society's beliefs of the essence of men and women and how they choose to display it in their social actions. Being a Westerner, with a Western frame of mind and Western views of gender equality, it appears that in both the Wana and the Kodi societies, men are the dominant gender. But to each society, this is not the case. Both are based on an underlying notion of men and women being equal, even if they are different as in the Kodi society. Dominance is not a part of their lives—it does not matter to them. This ethnography emphasizes the idea that each society thinks and acts according to what is best for them and cannot be restricted by Western prejudices.

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# The Popper Group | Richard Perez

## Today on *The Popper Group*: The Justification of Scientific Statements & Theories

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Karl: Hello and welcome to another edition of the *Popper Group*. The issue of the day: the problem of scientific justification in the acceptance of scientific statements. I'm your host, Karl Popper, and with me today is my most esteemed partner in philosophy and fellow alumnus of my old fraternity, the Vienna Circle, Rudolf Carnap. To lend a few words of wisdom and to keep us focused on the topic, the venerable Otto Neurath, also a member of the Vienna Circle is also here. And last but not least, the fledgling philosopher who has just published his debut work, *Straight Outta Capitalism*, a visceral polemic on academic learning, Clue Lessman. Welcome to the show gentlemen.

Group: Thank you, Karl.

Karl: Let us begin our discussion by clearly stating the nature of the problem by invoking the voice of Jakob Fries. Being the good empiricist he was, Fries held that to accept a scientific statement without logical support is to accept it as a *dogma*, needing no proof to be true and clearly the antithesis of all scientific effort. But to logically justify all statements leads us to *infinite regress* with one statement justifying another statement *ad infinitum*. In order to evade these dead-ends, Fries concluded that statements are not only justified by logical support, but also with sense experience, hence arriving at a psychological state of certainty, my old friend *psychologism* (LSD: 93).

Clue: "Psychologism" ...?

Otto: Yes, a little term illustrating the view that facts are expressed by statements describing subjective experiences of the world. This would, young man, render the goal of science as the systematic presentation of our immediate convictions (LSD: 94).

Clue: So what psychologism says is that perceptual experience is the bedrock of all facts simply because what we can experience cannot be doubted.

Karl: Correct Clue. However, experiences cannot be justified, only statements. In

order to get past this problem of psychologism, then, subjective phenomenal knowledge must somehow be separated from objective knowledge in the composing of our statements. This is extremely pertinent to our inquiry because there is a dangerous tendency to confirm our scientific theories with perceptual experience.

Otto: ...which is translated as: scientific statements should not be justified by a handful of experiences which coincide with our theories. In short, scientific theories must be warded against induction. I remember back during the First War....

Karl: I could not have said it any better myself, Otto. We run into trouble when *singular statements*, statements which describe particular instances of our experience, are converted to *universal statements*, those statements which are lawlike and immutable throughout time. They have the character of not containing any proper or particular names and are the type of statements which compose our scientific theories (LSD: 68).

We even run into trouble when we try to justify statements inferred from universal statements because there is always the possibility of finding the contrary of a universal, that which is called, in the epistemological vernacular, the *existential statement*. So, say in case of the molecular biologist, no matter how many times deoxyribonucleic acid is found as the storage blueprint of hereditary material in all living organisms, from prokaryotes to human beings, the conclusion that all organisms husband their genetic material in DNA is still not warranted.

Clue: Okay let me get this straight. Statements cannot be justified by induction because either it isn't the case that particular instances hold true for all instances or widely accepted notions of truth may be wrong?

Karl: Precisely. Now to dispel any confusion and crystallize my point on induction, let me refer back to my DNA example. No matter how many finite instances confirm DNA to house an organism's genetic material, they cannot justify the conclusion that all organisms keep their hereditary material in the form of DNA.

Rudy: I think we went over this a minute ago, and I have a feeling that I will not like what you are getting at, Karl, but I shall ask you anyway. How exactly do you feel about induction involving the state of scientific theories?

Karl: Well it's about time the cat got out of the bag! I believe that induction is inadequate to support our scientific theories, for to proceed inductively is to approve a theory with only a few confirming instances. It is this *verificationist* method of approving scientific statements which lends truth to half-baked methodologies such as chiropractic and psychoanalysis!

Clue: That's just crazy Popper! Now I can live with the first case, that singular instances shouldn't be made into universal ones; that's common sense. But in the second case, I don't see how we can advance our theories if we can't derive conclusions from well-established facts.

Karl: Then you must be due for an eye examination, Clue...

Otto: My paper on optics was a fine work!<sup>1</sup> It never received the proper recognition it deserved!

Karl: Er, quite true, Otto; you were indeed a...visionary. But to address Mr. Lessman's comments, one simply asks, "Is the act of seeing really a necessary and sufficient condition for believing?" Furthermore, I am suspicious of *anything* considered to be a "well-established fact." Induction leads to three no-account endings, and I am not as easily contented to put it aside with psychologism as Fries. As I've said before and shall stress again...

Clue: ...because you must like the sound of your own voice...

Karl: ...experiences cannot be justified as they are in accepting a psychologicistic stance; therefore statements are justified statement *qua* statement. This brings us to Rudy's thoughts on the matter.

Rudy: Right, I agree that the language of science and ordinary, hum-drum, everyday language are two very different things, and I propose a solution consisting of two modes of speech to help describe experiences. The language of science would speak of 'words' rather than of physical objects in its sentences. 'Ordinary' language, then, would simply be the normal, everyday speech of all beings non-scientific. What must be done is to translate sentences from the ordinary sense to the formal scientific sense (LSD: 96). With the help of these 'protocol sentences,' by which all sentences of science can be tested, your psychologism is disposed, Karl.

Clue: Could you simplify the definition of a protocol sentence, Rudy?

Rudy: A protocol sentence is merely one which represents experiences. They represent the contents of immediate experience, thus making them the simplest knowable facts (LSD: 96).

Karl: WRONG, Rudy. Your so-called 'protocol sentences' are nothing but a mirror reflection of the psychologism we are trying to dispel. I do not object to the testing of sentences with other sentences, but according to your account, protocol sentences are self-justifying statements describing experiences.

Rudy: What? Utilization of protocol sentences...

Karl: ...means that the experience is self-justifying in-itself. All you are doing is translating psychologism into a neat 'scientific' mode of speech. It won't do, so bark up another tree.

Otto: Perhaps, then, protocol sentences should be arbitrary instruments for the testing of certain statements.

<sup>1</sup> Neurath's 1915 paper, "Prinzipielles zur Geschichte der Optick," discussing the history of optics.

Karl: Oh? And how would we go about choosing which protocol sentences are to be used or discarded? Do you have a set of rules which you'd care to share with the rest of us, Otto?

Otto: Not at the moment, but I do have....

Karl: Then I assume we should just close our eyes and delete whichever sentence chance should happen to land our finger on! We would need rules for this idea to work. Unless, of course, you subscribe to such notions of "evil demons" running amuck deceiving people. Then it wouldn't really matter if there were rules testing protocol sentences or even science at that! A good idea, Otto, but without a method it doesn't hold water. In addition, I believe arbitrary testing of a protocol sentence would be contributing to a dogmatic stance.

Otto: Well I am interested in what your own answer will be, Popper.

Rudy: Yes, Karl. What answer do you have, if you have one at all?

Karl: Gentlemen, your overt cynicism and unprofessional immaturity is duly noted. With regard to the question at hand, yes, I do have an answer.

Rudy: And what, pray tell, is this grand solution of yours?

Karl: To start, we must first determine a method to clearly distinguish between objective science and subjective experiential knowledge.

Otto: Yes, yes. I think we have made that point abundantly clear already.

Karl: Obviously not clear enough since we have not as of yet made any progress in the method. To continue, knowledge concerns facts, and we become aware of these facts through observation. However, this 'awareness' hardly justifies the truth of any statement (LSD: 98). In addition, knowledge is also comprised of various sense experiences which give us human beings biases toward certain convictions, i.e., psychologism. Thus the main question in epistemology should be: *How can scientific statements and theories best be tested, rather than defended against doubt?*

Clue: Some would dispute that claim.

Karl: What was that, Clue? You're on national television, boy—speak up!

Clue: I said, "How does one answer that claim?"

Karl: By forming statements in an easily testable form according to logical precepts, Clue (LSD: 99). This way, people may easily check the steps behind the reasoning. If the checker should disagree with the statement then he should be able to point out the problem within the steps and offer a counter-method in the same logical fashion. If it is an objection based on feelings of doubt or convictions due to experience, then we simply reject the objection as unfounded. In short, I advocate a method of *falsification*.

Rudy: As opposed to verification I presume.

Karl: Indeed, Rudy. Verification is not a viable method to achieve our goal of testing scientific statements simply because it falls upon inductivist principles. Furthermore, the truth of the matter is never discovered via verification. By employing falsification, however, we may discriminate between fallacious and viable theories; all that is required is a single falsifying instance as opposed to the infinite verifying instances which confirm a fallacious theory.

Clue: Something seems fishy about falsification, Karl. I can't place it right now, but perhaps you can tell us what is used in falsification to test theories.

Karl: That would be the next logical move, wouldn't it Lessman? I call the standard by which we test our theories the basic statement. A *basic statement* is a self-consistent, singular statement (LSD: 84), having the form of a singular existential statement, i.e., a singular 'there is' statement (LSD: 104). This has two implications: (a) a basic statement cannot be deduced from a universal statement and (b) an existential statement can be derived from it, making it a falsifier for any strictly universal statement. The basic statement is the final point of testing statements and theories. After going through many tests and experiments, a decision is made to stop at a basic statement. We stop at a basic statement which is regarded as satisfactory (LSD: 105).

Otto: How is a basic statement justified?

Karl: Now we have reached the beauty of a basic statement: its justification lies within its own testing (LSD: 104). Just as statements with a theory may be tested, so may a basic statement.

Otto: And basic statements are tested with what? Other basic statements?

Karl: I must admit, Otto, you are a quick one for your age! Any one particular basic statement may be tested by any other basic statements deduced from it (LSD: 104). As you can see gentlemen, the basic statement is the cornerstone of our scientific foundations and the arbiter of paradigmatic theory changes. If and when a theory is proven false, it should be discarded in favor of a better-suited theory.

Otto: Time may have dulled my senses, but olfaction is the last to go and I can smell dogmatic (CENSORED) when it's as fresh as this!

Clue: Thank you Otto, that's precisely the dubiousness I felt earlier! It's clear that falsification is quite dogmatic on two counts: (1) accepting something simply because the counter-instance has not been found, and (2) the basic statement's reliance upon itself as the source of justification—you can't tell me that's NOT dogmatic!

Karl: It may sound dogmatic, accepting a basic statement on faith alone, but it is not because one stops at a basic statement only for the time being until the need for further testing arises.

Rudy: Then we would have an infinite regress if there should be anymore testing, Karl.

Karl: WRONG again, Rudy. To produce an infinite regress, one attempts to justify statements. Further *testing* with a basic statement only serves to falsify a theory or statement. In this respect, there is not an infinite regress, but an infinite progress. Otto, there seems to be something brewing in that senile mind of yours.

Otto: Yes, well what about psychologism? You seem to have said nothing about this in your account of basic statements, unless I've totally misunderstood your little tirade!

Karl: With regards to psychologism, I say this: The only role which perceptual experience plays in the testing of statements is in the decision to stop at a basic statement. But we do not attempt to justify basic statements by these experiences which only serve to motivate the decision to accept or reject a statement (LSD: 105). One cannot get any more justification from experience any more than by thumping the table!

Otto: But then everything is left up to the competence of the testers! How sound is that, Karl? Who's the feeble-minded one now!?

Clue: And you wrote a whole book on this?

Karl: Of course I did! After all, I am a philosopher.

Clue: So everything stops once it is "decided" on a basic statement which serves one's needs? That seems hardly plausible because there would be no certainty as to how "truthful" a statement is if we just "decide" when it seems to be falsified or corroborated at one moment in time. In fact, I don't believe that falsification is the central crux of science, much less the deciding point for the abandonment of one theory over another.

Otto: I'm inclined to side with young Lessman on this one.

Karl: You strike fiercely, my dear Lessman. Let's see if you are as accurate as you are rash in your attack. As for you, Neurath, you always were one to jump the sinking ship!

Otto: You'd like to believe that, wouldn't you?

Clue: As I was saying, falsification of a scientific theory provides no criterion for its abandonment. At best, much to your dismay, I'm sure, Karl, ad hoc statements would fall from the heavens in order to preserve it. In laymen's terms, we would have a constipated system of thought. In fact, falsification seems to support the very dogmatism you have tried to fight against, Popper.

Karl: Blasphemy, Lessman, utter blasphemy!

Otto: I think you've tooted your horn enough for the time being, Karl; let Mr. Lessman speak.

Clue: Thank you Mr. Neurath. Now as I was saying, a scientific community will not turn on a theory simply because it has been falsified, but will bandage, snip, and sew it with *ad hoc* statements until a theory becomes the proverbial Frankenstein's monster. Where is the progress in this endeavor?

Karl: Precisely! I'm against *ad hoc*-ing as much as the next rational person!

Clue: You may be against it, but this is what happens!

Rudy: Could you give an example?

Otto: Well, for one, there is Newton's account of light as rays in his *Optics*. If I recall correctly, his theory of light would make mirrors behave like non-reflecting, rough surfaces and he explained this phenomenon with the *ad hoc* statement, 'the reflection of a ray is effected...by some power of the [mirror] which is evenly diffused all over its surface' (AM: 44). Newton retained his theory, despite the fact that it was totally wrong.

Clue: I'm sure we're coming down to the last few minutes of the show, so in the interest of time I will have to appeal to the history of science, as Mr. Neurath has pointed out, as being evidence enough. However, I would like to add that propaganda and coercion subverts the "all-things-rational" business you purport scientific change to take part (*Against Method*: 16). One can say that a well-established practice needs to be changed, but who will listen to the ranting and raving of a madman?

Karl: A very interesting selection of words, indeed! I should like to apply those expressions to yourself, my dear Lessman, but discussing your psychological profile is a more appropriate issue for the likes of *Donahue* and *Oprah*! Right now I'd like you to explain how my method of falsification seems 'dogmatic.'

Clue: Simple enough, "my dear Popper," although I wouldn't go so far as to separate your own agendas from those of other shows. By concentrating attention on the prevailing theory, i.e., the theory which has withstood 'rigorous testing' and remaining 'unfalsified,' the scientific community loses out on the information which other less-established theories may have to offer, information which may encompass what the 'prevailing' theory establishes, but is overlooked due to simple prejudice with the familiar. In attempting to falsify established theories, ignoring the rich potential of newer ones, we stifle our own scientific progress. Falsification, therefore, is dogmatic in *automatically ruling out* these perspectives. The same goes with stopping at a basic statement—why should the buck stop there?

Karl: "Rich potential," Mr. Lessman? Just because a stream yields a few gold nuggets does not necessarily mean that there lies a potential gold repository! That argument hardly warrants a theory change.

Otto: Perhaps not Karl, but I believe that falsification stunts the arrival of new

facts in science (AM: 26). And if I may make an additional comment to compliment Mr. Lessman's criticism, falsification seems to take us back to where we started in terms of justification—where one accepted theory rules out a hypothesis another accepted theory may view it as an anomaly. In such a situation, not only are we stuck in deciding which theory has jurisdiction, but we must also endeavor to find out if either theory is "viable or fallacious."

Clue: I'll tell you what it boils down to: money and power. Whichever theory has the most support from the scientific community, that theory will be pushed and financed for research.

Karl: That's a very interesting point of view you have there, Mr. Lessman. However, there is a fine line between useful facts and mere trivia! If we were to yield to the "facts" every new theory presented, we would waste precious time and resources revealing which of theories are valuable and which theories are rubbish, and while we are on the subject, time is of the essence in ending this half-hour program! To summarize, Fries' Trilemma is a three-pronged problem in choosing among dogmatism, infinite regress, and psychologism in order to justify scientific statements with perceptual experience via inductive processes. Rudy Carnap, you offered us what kind of sentences?

Rudy: Protocol sentences which are...

Karl: **WRONG** because they are self-justifying statements describing experiences, i.e., psychologism, the doctrine that statements can be justified not only by statements but also by perceptual experience. These sentences cannot be arbitrary for the testing of certain statements because we are missing what, Otto Neurath?

Otto: A method, Karl.

Karl: **CORRECT**. My own solution is falsification where the basic statement is the final point in the testing of statements and theories in science which is tested thoroughly and can be tested further for an infinite progress in science. Clue Lessman, what was your objection?

Clue: That stopping at basic statements and waiting for them to be falsified neglects other potential theories which are less-established, leaving a foul taste of dogmatism in one's mouth.

Karl: But that all depends on the resources available for making such an inquiry, not to mention the knowledge of what you've been putting in your mouth! I'm Karl Popper, and this concludes another edition of the *Popper Group*.

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## Contributors

**BEEBE, TRAVIS**, is a Psychology and Music double major. He lives in Vermont and enjoys writing during his free time.

**CHOURDRY, RABIA**, is a Pre-Medical student who will graduate in May 1997.

**GOEPP, R. MAX Jr.** Born in Philadelphia in 1907, Goepp, graduated in the Lehigh class of 1928 and went to Oxford University as a Rhodes Scholar. He earned his D.Phil. at Queen's College, Oxford. He was known nationally as an authority in the field of sugar and carbohydrate chemistry, and was Director of Organic Research for Atlas Powder Company at the time of his tragic death in an air disaster off Newfoundland in October 1946.

**GOLDMAN, JEFFREY**, is from Bethesda MD. He is a Senior Behavioral Neuroscience major and International Relations minor. His activities include the University Choir, the S.T.A.R. program and the International Partners Program. He has also written for *Amaranth* and *Cultural Reed*. Jeffrey hopes to pursue an international career.

**GUPTA, SANJAY K.**, a recent graduate of Lehigh University, is currently a second year medical student at the Medical College of Pennsylvania and Hahnemann University.

**KNIFFIN, KEVIN M.**, a native Philadelphian, graduated *summa cum laude* in May 1995 as an Anthropology major. Plans for the future include travel, work, and graduate school.

**LAPHAM, JEROME JUSTUS**, is a Cognitive Science major from the class of 1998.

**LEO, NICOLE**, is a Behavioral Neuroscience major who graduated in May 1995.

**NORDT, ELIZABETH**, graduated in May of 1995 with a double major in Philosophy and Theatre. She is currently a President's scholar. From Salem, Va., with a love of travel, she still has no idea where she will be or what she will do next.

**OLSEN, ELIZABETH**, graduated from Lehigh in May 1995 with a degree in English. She has remained at Lehigh with a Presidential Scholarship which has enabled her to pursue an internship at the Allentown Art Museum where she is the associate curator of "Women's Work: Domestic American Needlework of the 19th Century."

**PEREZ, RICHARD**, is the author of one of the articles in this *Lehigh Review*, but he does not believe in personal identity.

*(continued)*

**SARACINO, MISTY ROSE**, is a hula girl back home on the island of Waki-Waki. She attends Lehigh University, and is majoring in Chemical Engineering. She aspires to create 103 new-and-improved coconut products that will bring peace and happiness to all personkind.

**SHELTON, DIANNE**, is a senior majoring in Sociology/Social Psychology and minoring in Pubic Relations and Health and Human Development. Originally from Towson, Maryland, she hopes to begin a career in the communications field after graduation.